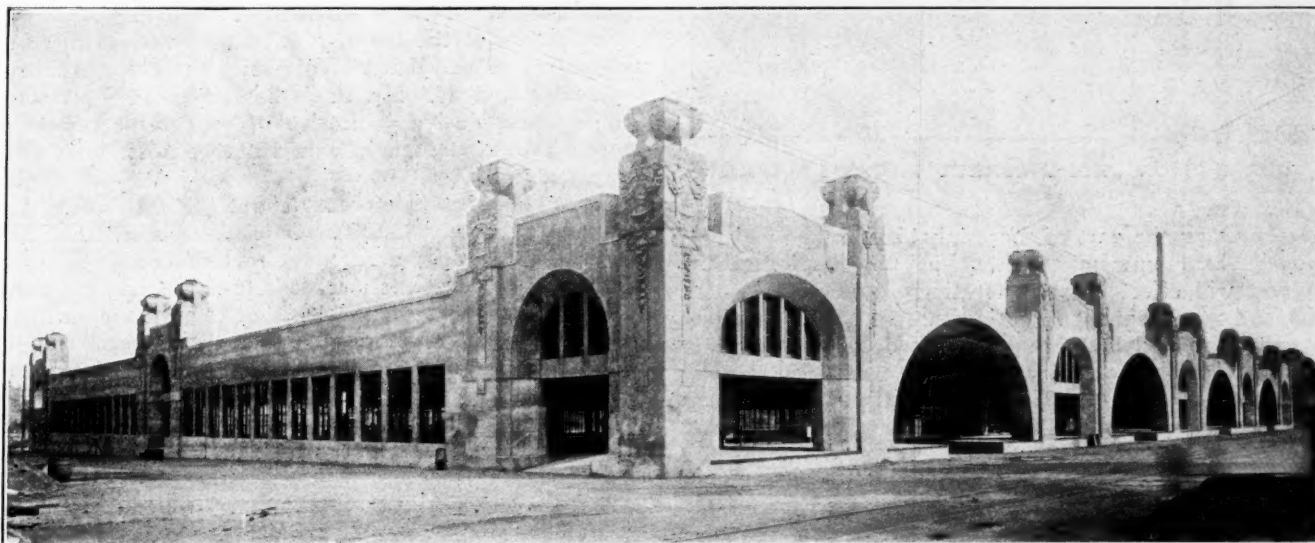


# Municipal Journal

Volume XXXIII

NEW YORK, AUGUST 8, 1912

No 6.



*Photographed by the Korb Photograph Co.*

ERIE AND SHORT STREET SIDES OF TOLEDO CITY MARKET

## TOLEDO'S MUNICIPAL MARKET

Unusually Ornate Structure Succeeding Old Frame Building—Intended for Retail Trade, but at once Monopolized by Wholesalers—Plans to Remedy This—Description of Arrangements.

By STERLING BEESON

A municipal market has been opened in Toledo, Ohio, which is much more pretentious, both as a structure and as a public enterprise, than most of those to be found in this country; the investment in it having been almost \$200,000. The proposition was given careful study and consideration by the officials and citizens before it was decided upon. In January, 1910, Mayor Brand Whitlock appointed a market commission, which visited all of the cities in the United States wherein a public market is conspicuous. Strange as it may seem, there are not many cities wherein the public market amounts to much, but the increased cost of living which has approached an almost intolerable state within the last two years in the big cities has forced a consideration of all markets with a view to lowering the cost of living, including a reform of the public market, which has heretofore been a place for the middleman, who is now by some held accountable for the high cost of food. The market commission held a series of public hearings after it had inspected all examples of good markets to be found. On the floor in these mass meetings were representatives of the various elements which make a market needful in any city. The grocers were out with a strong lobby. The gardeners (and Toledo is rapidly becoming a center in the production of "garden truck") were there with suggestions and demands. The housewives of the city were represented by committees and delegates from the

scores of neighborhood clubs and societies. The hearings were exhaustive discussions of the public market question. In the end the commission submitted a report, following which the city council put into effect legislation providing funds for the purchase of a suitable site and the erection of such a market as all had agreed should be built.

The question of site was of prime importance. There was offered the contention that public markets should be scattered, one in each section of the city. This was set aside by the arguments in favor of a big central market. The big central market brought up a perplexing question of location. To get the market in the heart of the city meant a very large expenditure. Weeks were spent in the investigation of sites by committees of the council.

Finally a very bold move was made, despite much criticism. A large tract of land in the heart of the tenderloin was purchased. The character of the property surrounding the site made it cheap. It was central, easily approached from all sides, and on one side of it ran Swan Creek, a small but navigable stream which runs through the heart of Toledo.

At this point it should be said that since the establishment of the market the character of that part of the city is rapidly changing. Police tightened lines about questionable places. Removals from the district were

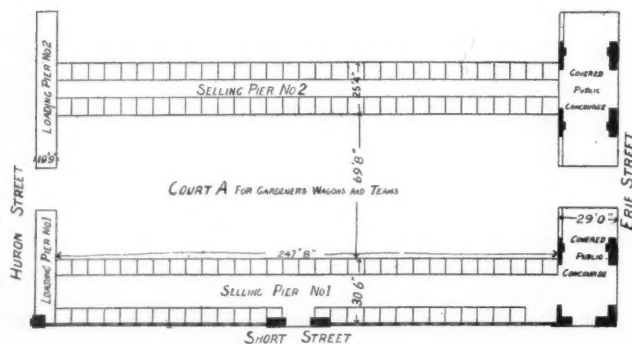


DEALERS ON SHORT STREET SIDE OF MARKET.

numerous on the part of those inhabitants who had previously held undisputed sway in that region. The market will effect the regeneration of that part of the city and a consequent large increase in property values.

After the site had been purchased E. O. Fallis, of Naseby Tower, Toledo, a widely known architect and one who has been identified with much civic betterment in Toledo, was selected to draw the plans for the market house. The market commission had recommended a market house with an auditorium over it. Abandonment of this plan by council threw the designing of the market almost entirely upon the architect. It was designed primarily to facilitate the business for which it was intended. That having been successfully accomplished, the architect gave to the structure such artistic beauty as was possible.

The entire area covered by the building and under roof is 420 by 286 feet. Three hundred and six selling spaces have been provided for producers, besides 760 lineal feet of loading piers for grocers, hucksters, etc. A selling



PLAN OF ONE END AND ONE INTERMEDIATE PIER.

space includes 64 square feet on the surface of a concrete selling pier and contiguous space in the wagon court for team and wagon.

A covered public concourse 30 feet in width and 420 feet in length connects all the selling piers. In the basement of the corner section is a very complete well heated and ventilated comfort station, for the use of which an individual is charged one cent.

The part plan presented herewith shows one of the end piers and one of the interior ones. The whole plan includes three of the latter, which have been constructed, and another end pier which has not yet been built. Each selling pier is raised 2 ft. 6 ins. above the wagon courts.

The walls, piers, etc., are constructed of reinforced

concrete. Columns, girders, trusses and other structural parts are of steel. The great wagon courts and the selling piers are well lighted by continuous skylights over the centers of each. The electric lighting system is very complete. In addition to the general electric lighting, every space is provided with an incandescent light.

Fire hydrants are located in each wagon court and provided with hose, by the use of which every day, at the close of the market, men wash the floors of the entire building, thus keeping it in a perfectly sanitary condition. To facilitate flushing and cleaning, the floors of piers and courts have a uniform pitch toward the rear of eighteen inches in the depth of the building.

The design of the building is unique, very attractive, well suited to the material of which it is constructed, and to its purpose. Mr. Fallis has produced a pleasing and practical design indicative of monolithic concrete construction, and such as would not be possible in any other material.

The building complete cost about \$130,000. The site cost approximately \$50,000. Officials estimate that the market will produce a revenue from rentals of at least \$30,000 yearly. But the market is to-day a very poor investment, if judged on the basis of present income. It was a notion of some one that the selling spaces should be auctioned. The architect's contention that a fixed price should be placed upon each stall at the beginning of each season was overruled, and on the day of the grand opening the auctioneer undertook to dispose of the stalls or selling spaces.

There is every indication that men who had paid as high as \$400 for a place or stand in the old and entirely inadequate city market got together on the proposition of buying space in the new market, and the auctioneer could not create competition for the spaces, but they were sold for much less than those in the old market had produced. Contracts with the purchasers of these spaces prevent the application of any remedy until another season opens.

Because of its railroad facilities Toledo is fast becoming recognized as an ideal distributing point for perishable produce. Many out-of-town buyers are in the city market every day, and buy and ship vast quantities of produce from the city. The keen demand for such produce has yearly induced many farmers to abandon the old crops of hay and grains and to raise "garden truck." The have found the soil about the city to be ideally adapted for the raising of vegetables and fruits, and many have become very rich and have built vast hot-houses and now produce green things the year round for foreign markets.

It is this demand, greater than the supply, that has



GROCERS' WAGONS ON ERIE STREET SIDE.



crowded the consumer off Toledo's new city market. The market is solely and exclusively a wholesaler's market. The gardener will not bother with a retail trade and puts such prohibitive retail prices on such stuff as he may be coaxed to sell at retail, that the consumer can buy the same at a better price from the grocer—a condition of affairs which a Toledo newspaper is making a determined fight to reform.

City officials are now endeavoring to find a way to satisfy everybody. The gardeners say they will not bring produce to a retail market. The grocers, commission men, jobbers, and out-of-town agents continue to clean up the market before the consumer gets down there to purchase. The income from the market is not what it should be by many thousands of dollars. Contracts absolutely prevent the changing of rules or prices for market concessions. The city is helpless until the expiration of contracts with gardeners and other producers.

The new market has been plenty large enough to date, but it can easily be enlarged when necessary, as the entire site purchased is larger than the present building. The old city market offered 118 selling spaces on the floor of a wooden shed about 25 feet wide. Gardener's wagons were backed up to the curb for blocks around the old market and trading was done in the streets, causing an intolerable traffic congestion. There were no conveniences. Monroe street, one of the big arteries of traffic in Toledo, was blocked by commission men who used the sidewalk whereon to store purchases. Now commission men are buying property in the vicinity of the new market, and are erecting handsome structures and abandoning the former commission district to the uses for which it is more fittingly adapted by the growth of the city.

Toledo officials face the fact that the consumer does not get a look-in on the new market, and that therefore there should be no consideration of a supposed value to the public in the discussion of cost and income from the market. It must be made to pay its own way if it is to be left as the trading place of jobbers.

A free city market wherein retail sales shall be exclusively allowed may be established at the abandoned old city market. Officials are reluctant to force such



REAR VIEW OF MARKET, SHOWING CONSTRUCTION.

regulations as will drive into other quarters the commission business now represented in the new market. The growth of Toledo as a produce center depends upon the fostering of such trade as is now the rule upon the new market.

On the other hand the multitude of workers whose wives go to market every morning, sometimes walking blocks before daylight to get an early choice, are demanding a retail market where middlemen do not control the price and ignore the citizen.

There are 30 retail selling spaces in the new city market, but there has been no business done in these spaces. The purchasers of these retail selling spaces are mostly hucksters and others who do not intend to use the spaces but who wish to forestall anybody who might undersell the retail dealer who runs a wagon or store. The new market is not fitted for the sale of meats. A cold storage plant is not included in its plan.

The enlargement of the market will involve the diversion of Swan Creek, a plan now being worked out, and the extension of the market house across the block to a parallel street. The development of this addition as a retail market is now under consideration.



Courtesy Toledo Blade.

FRONT OF NEW CITY MARKET.

### PUBLIC MARKET FOR DES MOINES.

The much discussed high cost of living has, during the past year, given rise to many attempts at reducing the cost of meat and vegetables to the ordinary citizens, and the city of Des Moines recently decided to test whether a public market would serve this purpose to any extent. The Mayor and commissioners a few months ago announced that a small plot of lawn at the City Hall would be opened as a municipal market; although many of the officials were skeptical as to whether this would be at all successful in producing the result aimed at. Four or five farmers sold vegetables from their carts on the lawn the first day, about double the number appeared on the second day, and within a week more than one hundred farmers were selling at this public market. Within a month it had become so popular that wagons stood for three blocks along the curb on market days. It is said that in many instances the prices of farm produce were cut to 50 per cent. or less of what they had been previously. Citizens from all sections of the city patronize the market, many coming in automobiles to make their purchases. The farmers bring for sale not only vegetables, but milk, cream and butter, chickens and even home-cured meats. Cider and home-canned fruits are among the materials prepared on the farm and sold at this market.

The market is now being operated three days a week on the East Side and the other three days on the West Side. As soon as the new Municipal Building is occupied, the old City Hall will be remodeled and turned into a market in which truck farmers, gardeners, dairy-men and poultry raisers may sell direct to consumers during the winter months.

### LONDON ROAD CONGRESS IN 1913.

Requests have been made by the International Association of Road Congresses, which meets in London in June, 1913, that the American Association for Highway Improvement, which is the clearing house for the road movement in the United States, designate distinguished American engineers to prepare papers on the various subjects which the International Congress at London will consider.

The United States Government is the only Government among the powers that is not officially represented in the International Association of Road Congresses. The Association was formed for the purpose of studying the methods of adapting streets and roads to modern traffic conditions. France has a model system of roads, but the chief engineers several years ago discovered that the roads were rapidly being destroyed by motor traffic. The French Government considered the situation so serious that steps were taken to form a Congress in which all nations should be represented so that the experience of all might be exchanged for the general welfare.

Because the United States has delayed the appointment of representatives in the Congress the officers of that body designated the American Association for Highway Improvement to act as the American branch of the International body. Among those selected by the American Association for Highway Improvement to read papers at the London meeting of the International Association are: Powell Evans, of Philadelphia; A. W. Dean, Chief Engineer, Massachusetts State Highway Commission; A. G. Batchelder, Chairman of the Executive Board of the American Automobile Association; A. N. Johnson, State Highway Engineer, Springfield, Illinois; Prof. Arthur H. Blanchard, of Columbia University; Austin B. Fletcher, State Highway Commissioner of California; Horace M. Swetland, of New York; George W. Tillson, Consulting Engineer to the

Borough of Brooklyn; John R. Rablin, Chief Engineer of Metropolitan Park Commission of Boston, Massachusetts; Harold Parker, of Massachusetts; Dr. Joseph Hyde Pratt, State Geologist of Chapel Hill, North Carolina; Wm. Phelps Eno, of Washington, D. C.; Henry B. Drowne, of Columbia University; Clifford Richardson, of New York City; Dr. L. I. Hewes, of the U. S. Office of Public Roads; Morris R. Sherrerd, of New Jersey; Wm. H. Connell, Chief of Bureau of Highways and Street Cleaning of Philadelphia; Prevost Hubbard, of the Institute of Industrial Research of Washington, D. C.; Maj. W. W. Crosby, of the Maryland Geological Survey, and Dr. Clayton H. Sharp, of New York.

### HYPOCHLORITE TREATMENT OF WATER.

A recent issue of a monthly bulletin of the Ohio State Board of Health contains a paper by W. H. Dittoe, chief engineer of the Board, in which he gives a brief statement of the present status of the treatment of water with hypochlorites. He states that at present this treatment is used in about 100 place in America, these including some of the largest cities of the continent, among them Milwaukee, Minneapolis, Omaha, Council Bluffs, Indianapolis, Nashville, Cincinnati, Columbus, Pittsburgh, Harrisburg, Philadelphia, Erie Montreal and Toronto. The chemical actions which take place depend, said he, for their completion upon the presence of free or half-bound carbon dioxide and oxidizable organic matter. If the reactions are completed before the treated water reaches the consumer there will be no noticeable effect of the treatment. If, however, the reaction is not complete and the hypochlorous acid is not entirely broken down, objectionable tastes and odors will manifest themselves.

The commercial grade of bleach generally used in water disinfection contains 35 per cent. available chlorine as expressed by the analyst. It is in these terms that the rate of treatment also is indicated. In disinfecting water supplies, it is customary to use such quantity of bleach as to secure the application of 0.5 parts per million more or less available chlorine. For instance, at Boonton, N. J., 0.35 part per million have been found sufficient to secure almost complete sterilization. At Erie, Pa., an average of 0.32 part per million is used. At Cleveland, Ohio, during the first few months of treatment about 0.7 part per million was applied, it being claimed that this excessive amount was necessary to secure bacterial efficiency. At the present time about 0.5 part per million is used. At Columbus, Ohio, where the treatment is an adjunct to filtration, 0.3 to 0.35 part per million is used.

Owing to the minute quantities of bleach applied it is absolutely necessary to secure good mixture or distribution of the chemical in the water if complete treatment is to be secured. Storage after treatment is also of value in securing a completion of the reactions. In the absence of both good mixture and storage it is difficult to secure satisfactory results from the treatment.

Recently evidence has been presented showing a somewhat unusual and entirely unexpected effect of the treatment, namely, a material increase in the total numbers of bacteria in the water, due to an after-growth occurring a number of hours after the treatment. At the present time not much reliable information is available as regards this effect. The exact species of bacteria causing the so-called after-growth has not been determined, but it is claimed that they are of the harmless variety. The rapidity and extent of the increase remain also to be learned, as well as the influence of varying amounts of chlorine used.

When excessive quantities of bleach are used objectionable tastes and odors are produced in the treated



water. The source of these tastes and odors is a debatable point, some authorities attributing them to undecomposed hypochlorous acid, and others to compounds resulting from the reaction upon the organic content of the water. Recognition should be given to the possibility of producing a corrosive effect upon metals by overtreatment of the water supply with hypochlorites. It has been claimed that this effect has resulted in a number of instances, although no reliable data are available to substantiate such claims.

## HETCH HETCHY WATER-SUPPLY

### General Features of Plan for Supplying San Francisco and Neighboring Cities With Water—For Irrigation Also

For more than ten years the city of San Francisco has been developing a plan for securing water from the Sierra Nevada mountains for its public supply. A number of sources of supply were available, but for several reasons, among these being that of lower cost, the use of the so-called Hetch Hetchy or Tuolumne river supply was decided upon. The Hetch Hetchy valley, however, is a part of the national reservation, and it was necessary to obtain permission from the Federal government to use this valley as a large storage reservoir. In May 8, 1908, a permit was obtained to use Lake Eleanor, which is below the Hetch Hetchy valley, as a site for a storage reservoir, with further permission to use the latter valley when the limits of storage of Lake Eleanor had been reached. In 1910 Secretary of the Interior James R. Garfield issued an order to the city to show cause why that portion of the permit granting rights to use the Hetch Hetchy valley should not be eliminated and the city's rights confined exclusively to the use of Lake Eleanor. At a hearing in May of that year the whole matter was referred to a board of army engineers. The city engaged John R. Freeman to study the matter thoroughly and present the city's case to this board, and his report was filed with the board in July of this year. Those opposing the use of this valley by the city are given a few weeks to file objections to the city's report, and the board is expecting to submit its report to the Secretary of the Interior before November 1st.

The objection to the project is chiefly because of the fact that this valley is a very important scenic feature of this part of the national reservation, and the flooding of it to a depth of nearly 300 feet would certainly change, and it is claimed would greatly detract from, its present beauty. Moreover, it would be against the very purpose and policy of the reservation of this and other parts of the Sierra Nevadas.

In Mr. Freeman's report the ultimate requirement for water is figured to the end of the century, and the plan takes into account not only San Francisco, but all of the cities on the Bay, including Richmond, Berkeley, Oakland, Alameda, San Jose, Palo Alto, Redwood and San Mateo. It is estimated that by the year 2000 the population in these cities will total 3,632,000 and will require a daily water supply of 441,000,000 gallons. In addition, it is proposed to obtain a supply of about 100,000,000 gallons a day for irrigating 95,000 acres.

In addition to the report of Mr. Freeman there will be others dealing with the sources of supply now under control of the People's Water Company; with the quantity available from sources on the western shore of the peninsula and those south of the county line; with the yield of Alameda creek and Livermore valley, and a report on the geological conditions of that section of the country.

The general features of the plan as described in Mr. Freeman's report are briefly as follows:

1. A dam 300 feet high at the dam site at Hetch Hetchy by which the floor of the valley will be flooded to a depth of 270 feet.

2. A wagon road to Hetch Hetchy valley equal in point of construction to the State highways, with no grade exceeding 8 per cent.

3. A scenic road in Hetch Hetchy valley on both sides of the lake. This will make available the wonderful attractions of a region now inaccessible.

4. The Hetch Hetchy aqueduct from the valley to San Francisco. This would be largely in the form of a tunnel about ten feet in finished diameter, mostly deeply below the surface of the ground along the approximate route, extending down stream from the proposed reservoir to the easterly edge of the San Joaquin valley. Thence continuing westward across the valley the projected aqueduct will be composed first of one steel pipe 7 feet 6 inches in diameter, and ultimately of two steel pipes side by side about 45 miles in length. At the westerly side of the San Joaquin valley the steel portion is to end about eight miles westerly from the San Joaquin river. From this point the aqueduct proceeds westerly, mostly in the form of tunnels about 12 or 13 feet in diameter, to a point near the village of Irvington, at which point a terminal chamber and gate house will be built and branch aqueducts lead off as desired to Oakland, San Jose, San Francisco and other communities. From this point the aqueduct would proceed in the form of a steel pipe, submerged in the portion across the Dumbarton narrows near the head of the bay (or it could be carried on dry ground around the head of the bay) to a suitable point in San Mateo County, whence it could discharge by gravity flow at an elevation of 320 feet through a new tunnel into Crystal Springs reservoir or could feed branch lines leading to neighboring communities and into a main aqueduct line leading directly to San Francisco.

The proposed aqueduct between Hetch Hetchy and the Irvington gate house would be designed to deliver by force of gravity without pumping a quantity somewhat in excess of 400,000,000 gallons daily (equivalent to 620 cubic feet per second). All the tunnels will from the first be built to their full size and smoothly lined with concrete. During the early years with only a single pipe line across the San Joaquin valley the delivery of the aqueduct would be in excess of 200,000,000 gallons daily—possibly 240,000,000. The branch line to supply the San Francisco peninsula will have a capacity of about 100,000,000.

The communities to be immediately supplied require for domestic and municipal purposes less than one-half of what a single pipe line will bring, but since the surplus will flow without the cost of pumping, it is proposed to bring all the water the pipe line will carry and make the surplus available for irrigation, principally for intensive farming and truck gardens very much as it is proposed to use the surplus capacity of the Los Angeles aqueduct; all of this use tending to the prosperity of those districts and tending to a cheapening of the food supply.

The portion of the tunnel about twelve miles in length next down stream from Hetch Hetchy dam would be delayed in construction for some years and meanwhile the city proposes to divert the water from the main Tuolumne river by a temporary dam at a point about one and one-half miles above Cherry creek. This point will be called the "Early Intake." Close to this at some future time the city will build Power House No. 2.

The city proposes to construct a tunnel eight feet in diameter from Hetch Hetchy reservoir to the reservoir site in Cherry valley, passing beneath the Lake Eleanor reservoir site with intake shafts at Cherry creek and

Lake Eleanor for the purpose of diverting their waters into the Hetch Hetchy reservoir.

Small and inexpensive dams will be constructed at Cherry creek and Lake Eleanor. Perhaps fifty years hence the city will replace these dams with high masonry dams for additional storage purposes. In the distant future other dams in other localities may be desirable.

The city does not contemplate immediate development of hydro-electric power. There is only one power-drop in the aqueduct line first to be constructed. The site for this is at Moccasin creek, 141 miles from San Francisco along the aqueduct line. The capacity of the line at this point is 620 cubic feet per second. The elevation of the tail water at this place will be 890 feet. The water level at the intake will be 2,315 feet and the gross fall is 1,425 feet. This should produce 70,500 horse-power.

When the up stream aqueduct is completed another power drop will become available and 75,000 horse-power can be developed. From the Cherry-Eleanor conduit another power development can be had, which, though small, might be worth saving. It would approximate 12,500 horse-power. The total possible power development would be 157,500 horse-power.

## BALTIMORE'S GREAT WHITE WAY

By STUART STEVENS SCOTT.

The new system of public ornamental electric street lighting recently installed in the city of Baltimore, Maryland, is the first installation of its kind in the country (with the single exception of a small installation in the city of New Haven, Conn., which served practically only the purpose of a sample) and is the largest single initial installation of public ornamental street lighting in the country, comprising some six hundred posts covering approximately sixty blocks in the business district of the city. The promotion of this system was accomplished by Geo. A. Miller, who is known all over the country as "White Way Miller."

The lamp employed is the new ornamental inverted luminous arc recently perfected by the General Electric Company. Its chief characteristics are its power of distributing a large volume of light evenly in all directions and the facility with which it may be employed in ornamental street lighting, that is, inverted on the top of an ornamental street lighting standard or post.

While Baltimore is now perhaps the best lighted city in the country, this new installation is not what is usually known as the modern typical "Great White Way," but may be more properly described as a system of permanent ornamental public commercial lighting, achieving, first, Light, and incidentally Ornamentation. The new lamp is quite revolutionary in character and sets a new pace in ornamental street lighting.

One of the peculiarities of this ornamental inverted luminous arc is that, while the lamp or the light itself is only another adaptation or variation of the old style arc, with which we are all familiar, yet owing to the peculiar construction of the globe, it has the faculty of eliminating all shadows, including the shadow of the post itself upon which the lamp is erected, and at the same time diffuses a great volume of light, principally straight up, but also in about an even volume in all directions. It has been truly said that Baltimoreans will for the first time see the contour or the skyline of their tallest buildings at night.

The globe is approximately sixteen inches wide and eighteen inches tall and is of the general shape of a lady's corset (for the want of a more concrete comparison) and is filled with a perfectly even, soft, pearly light, not too glaring at its source and yet bright enough to achieve

its practical purposes. The globe is absolutely filled with this light and does not flicker or fluctuate in power or efficiency. The internal mechanism of the lamp is somewhat large in bulk and more or less intricate, and with the casing, weights some forty-five pounds, and is about five and a half feet in length.

Owing to the peculiar construction of the globe, every inch of which is designed with a view of achieving its particular purpose, it requires a post or lighting standard of a special design to conform to its contour. The Municipal Art Commission designed the standard used in Baltimore, which is a thing of artistic beauty and conforms wonderfully well to the peculiar shape of the globe.\* In Baltimore one large globe is used instead of the usual cluster of globes containing Tungsten lamps on a heavy Grecian standard.

The city of Baltimore, in contract with the local Consolidated Gas, Electric Light & Power Company, agreed to light and maintain the system after it was installed;



BALTIMORE'S NEW LAMPS ON FAYETTE STREET.

the money to defray the cost of the street equipment complete was subscribed by the merchants and property owners along the streets thus lighted at so much per front foot, each according to his individual frontage, and the local electric company agreed, in addition, to furnish its present underground equipment and such other new copper cable as was necessary and make service connections to the new posts that were put in, which, in most cases, were placed in the holes made vacant by the removal of the old system.

## STONES IN WATER MAINS.

Fire Chief Bowker of Passaic, N. J., notified the Acquackanonk Water Company on June 29 that while fighting a fire in Myrtle Avenue on June 28 there was a steady stream of stones into the hose, choking the nozzles. Four times nozzles became plugged and had to be changed. The fire was in a shed adjoining a factory. It progressed with every change the firemen had to make on their lines, but they succeeded in extinguishing the fire before it spread to adjoining buildings. It was necessary for the workmen of the water company to open several hydrants in the vicinity and clear the main of debris which had dropped into the pipe-line when new mains were installed recently.

This incident illustrates the necessity of carefully flushing out newly laid water pipes before a fire. It is too often that mains for public water supply are hurriedly laid, insufficiently tested and no attempt whatever made to ascertain if they are clean and free of the numerous things that find their way into water pipes.

\*This was illustrated in our issue of March 14.



# Municipal Journal

Published Weekly at  
50 Union Square (Fourth Ave. and 17th St.), New York  
By Municipal Journal and Engineer, Inc.  
Telephone, 2805 Stuyvesant, New York  
Western Office, 144 Monadnock Block, Chicago

S. W. HUME, President  
J. T. MORRIS, Manager A. PRESCOTT FOLWELL, Secretary  
A. PRESCOTT FOLWELL, Editor  
F. E. PUFFER, Assistant Editor

## Subscription Rates:

United States and possessions, Mexico, Cuba.....\$3.00 per year  
All other countries..... 4.00 per year  
Entered as second-class matter, January 3, 1906, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879.

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Subscribers are requested to notify us of changes of address, giving both old and new addresses.

Contributions suitable for this paper, either in the form of special articles or of letters discussing municipal matters, are invited and paid for.

Subscribers desiring information concerning municipal matters are requested to call upon MUNICIPAL JOURNAL, which has unusual facilities for furnishing the same, and will do so gladly and without cost.

AUGUST 8, 1912.

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## Markets and High Food Prices.

The rising cost of food supplies all over the country (and in Europe also, in fact) is rapidly becoming a question which the people are urging upon their legislators, Federal, State and city. The efforts of two cities to bring about reductions in local prices by the opening of municipal markets are related in this issue, one having been successful, the other not. In New York another method has just been recommended by a State food investigation commission, this being the fixing of primary or wholesale prices by systematic auction sales in lots suitable for purchase by retailers, these auctions to be conducted by the city. The committee also believes that a reduction of 12 per cent. of the retail price could be made in the cost of handling and distributing the food, which now amounts to 45 per cent. of the price. The committee suggests that large retail stores which purchase direct from the producer and sell direct to the consumer would make possible a considerable reduction; and that a municipal market department, which would keep producers supplied with information concerning market needs and prices, would be of service. They state that trading stamps add about 3 per cent. to the cost, and the persistent advertising of special foods increase cost by making "dead stock" of other brands.

The excessive cost of handling within the city is more

or less of a local question; but the idea of a city bureau to advise producers concerning needs and prices from day to day, and the bringing of the producer and consumer into more immediate trade relations would seem to be applicable in every city.

## Reporting Typhoid Cases.

We have several times called attention to the fact that the physicians in certain cities are either inefficient or are lax in obeying the laws which require the reporting of cases of communicable diseases, this being indicated by the official records of typhoid cases and the deaths from this disease for a given year. In a recent report from Atlantic City, N. J., we find a table of data which not only apparently confirms what we have previously said, but would seem to reflect great credit on both the ability of the physicians of that city and their conscientious observance of the laws regulating the reporting of such diseases. During the ten years prior to 1912 the number of typhoid cases reported each year and the deaths for the same year were as follows: 57, 4; 83, 9; 55, 8; 42, 2; 59, 5; 50, 7; 94, 5; 47, 2; 53, 4; 26, 3. Our previous criticisms have been based on the assumption that the deaths from this disease average about one for each ten cases, whereas in a great many cities the number of cases reported does not average more than three or four for each death. In the above record of Atlantic City we notice there were only three years out of the ten in which the number of deaths exceeded 10 per cent. of the number of cases, and during most of the years of this decade the deaths fell considerably short of 10 per cent. As stated, this would seem to indicate that practically all cases are reported, and also that on the average more than 90 per cent. are cured, thus indicating a more than average skill of the physicians in that city in treating this disease.

The table from which we quote was published in the report of the Water Board for the year 1911, and the conditions indicated reflect credit upon the water supply also. During the past three years the number of deaths have been 2, 4 and 3, respectively, or 5, 9 and 6 per 100,000. During the seven years prior to 1909 the number of deaths per 100,000 were 11, 25, 20, 6, 10, 20 and 12 per year. The typhoid death rate for New England and the North Atlantic States probably averages between 15 and 20, so that the record of Atlantic City during the past few years has been a very favorable one.

## Spacing of Fire Hydrants.

Municipal Journal,  
New York City,  
Gentlemen.—

In the recent articles appearing in your paper concerning the economical spacing of fire hydrants, no weight seems to have been given to what I consider the most important matter, i. e., efficient service, which can only be given by providing plenty of hydrants. In business sections of cities, two hydrants at street intersections and one in the middle of the block are the least which can be recommended; and if the block exceeds 300 feet in length an additional one should be added. The most important thing in fire fighting is to get there quickly, couple up and get water going with the least possible delay. If your trucks are heavily loaded with useless hose, this can not be done. It takes time to lay a long string of hose and there are the additional disadvantages of great friction loss through long lines, greater liability of damage to them, and increased number of leaky couplings, which are always happening at fires. If we consider in addition the gathering up and cleaning of the hose after the fire, especially in freezing and stormy weather, there seems to me to be no argument left in favor of long spacing of fire hydrants. Plenty of hydrants and short lengths of hose are absolutely needed for efficient service.

Yours truly,  
E. L. Farnsworth,  
Kansas City, Mo.

## NEWS OF THE MUNICIPALITIES

Current Subjects of General Interest Under Consideration by City Councils and Department Heads—Streets, Water Works, Lighting and Sanitary Matters—Fire and Police Items—Government and Finance.

### ROADS AND PAVEMENTS

#### City Plant Saves Money.

Kansas City, Mo.—The value of the municipal asphalt plant to the property owners of Kansas City was shown recently when the cost of paving of Fifteenth street from Virginia avenue to Woodland avenue was estimated. The cost will be \$1.62 a square yard. The usual price is about \$1.90.

#### Some Asphalt Roads Cost Less Than Macadam.

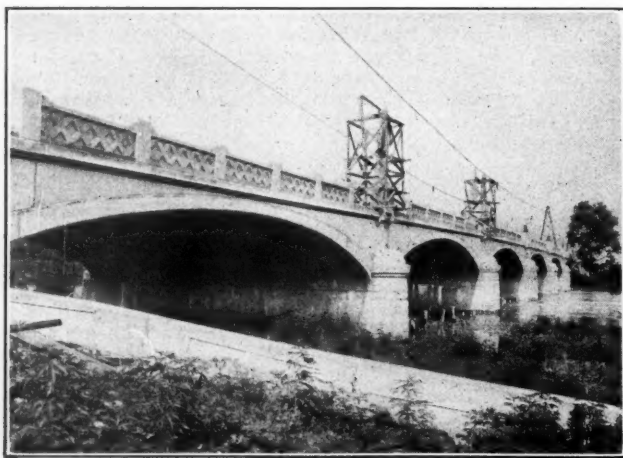
El Paso, Tex.—Judge Albert S. Eylar has written a letter to "The Herald" quoting figures going to prove the general statement that El Paso county's asphalt roads cost less than plain macadam roads in some states. According to the data presented, the asphalt roadway is generally laid in this county for 60 cents per square yard or less. In one instance, where a road was built under the direction of the United States Bureau of Roads, the cost was 70 cents. However, as Judge Eylar states, the items of road construction other than roadway, such as bridges and drainage, make comparisons of cost based on the mile unit of limited value.

#### Road Open to Port Jefferson.

Port Jefferson, L. I.—The Jericho Turnpike, the main highway on the north side of Long Island, after having been closed for nearly two years at points east of Woodbury, was opened last week. This means that there is now a clear road the entire distance to Port Jefferson. The turnpike is reached from New York via the Hoffman boulevard and Hillside avenue. From the village of Queens it runs through Floral Park, East Williston, Jericho, Woodbury and Commack, to Smithdown, and from Smithdown to Stony Brook, St. James and Port Jefferson. The run between East Williston and Port Jefferson is a distance of forty miles through pleasantly wooded country, with only one railroad crossing the entire distance. The Jericho Turnpike has been transformed from an old country road into an ideal motor parkway, at a cost to the State of \$10,000 a mile. The new part which has just been opened is fourteen miles long and extends from the Nassau county line to the Nissequogue River bridge at Smithtown.

#### New Bridge Will Form Suburban Connection Link.

Dayton, O.—Two views of the new Stewart street bridge which is rapidly nearing completion, are shown in the accompanying pictures. The first picture shows the top of the bridge which is now being paved, and the other picture shows a side view of the structure. When completed, the bridge will connect the suburbs of South Park and Edgemont with a direct route of travel.



Courtesy Dayton Daily News.

NEW STEWART STREET BRIDGE.

#### Rushing New Pavements.

Lackawanna, N. Y.—The work of paving with vitrified brick that portion of South Park avenue between the Buffalo city line and Blasdell is being pushed rapidly. Buffalo autoists are particularly pleased with the work of the State Highway Department and the municipal authorities who were instrumental in bringing about this improvement. The work of transforming the Hamburg turnpike into a State highway is going along satisfactorily, despite several drawbacks.

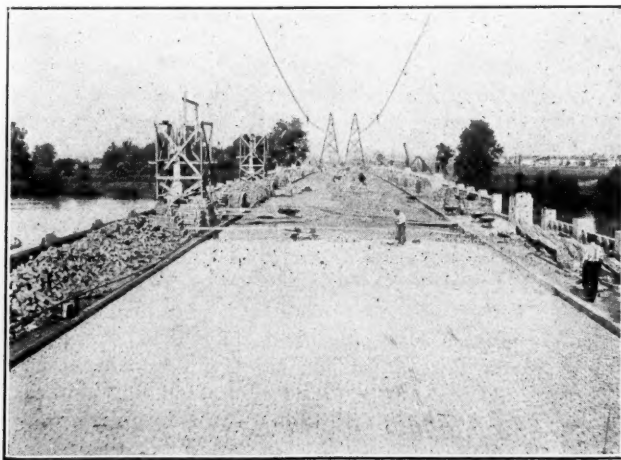
#### Competing for Honor of First Concrete Road.

Neenah, Wis.—People of Neenah, Menasha and Appleton resent the claim of Fond du Lac business men that the new concrete road between Fond du Lac and Oshkosh, now under construction, is the first in the State. A collection was taken here some time ago and a new concrete road which is supposed to be the first in the State between the Twin Cities and Appleton, is completed and will be open to traffic in a few days.

#### Forty-seven Pennsylvania Counties Want State Aid.

Harrisburg, Pa.—Forty-seven of the counties of Pennsylvania have asked for State aid in the construction of roads aggregating almost 740 miles in length in less than a year, and as rapidly as estimates can be made and the approval by county commissioners and local authorities given to these estimates, the State Highway Department will take the steps necessary to award contracts. Many of the applications for the assistance of the commonwealth on a basis of one-half the cost, as provided by the Sproul law of 1911, have not been followed up by officials in the districts proposed to be improved, with the result that work of bettering highways has been retarded.

The provisions of the act of 1911 are similar to those of previous good laws, except that where boroughs or townships unite with counties in asking for State aid they are to receive but fifty per cent. instead of seventy-five per cent. of the cost. The State aid feature of the earlier laws was retained in the Sproul law, which, however, is best known because of its provision for a system of main State highways. In other words, the means of obtaining State aid in construction of roads is in force as much to-day as it was five years ago, only the terms have changed. Where applications have been made for construction of roads on the basis of one-half of the cost to be paid by the State the engineers of the State Highway Department make estimates which are then forwarded to local authorities for their information and approval before bids are asked for construction.



Courtesy Dayton Daily News.

LAYING PAVEMENT ON NEW BRIDGE.



**State Road Nearly Done.**

Grantville, Pa.—According to Inspector J. W. Lape, of Sheridan, the State road between Lebanon and Grantville is rapidly nearing completion. Mr. McCormick, of W. H. Gobel & Co., the contracting firm, under whose direction the highway is being built, made a tour of inspection recently. The road is to be 7,415 feet long and 16 feet wide. It is built on a telford foundation, with a macadam top dressing.

**Rigid Street Laws Proposed.**

Sacramento, Cal.—Ordinances that will place rigid restrictions about street contractors who have in the past appropriated the use of streets without regard to the rights of the public, are being prepared by City Attorney R. T. McKisick at the suggestion of Commissioner of Streets Burke. One of these ordinances will make it unlawful for contractors to dump material on the streets before forty-eight hours preceding the beginning of the work. Heretofore contractors have piled the streets high with gravel and rock many days before work was started, thus impeding traffic. Another ordinance will require contractors who are mixing cement, concrete or plaster to provide regular mixing boxes for the purpose. This ordinance will make it unlawful for contractors to mix the material on loose planks. This careless method has resulted in the lime often leaking through the planks and damaging the asphalt streets.

**SEWERAGE AND SANITATION****Reports Menace to Health of Public Exists in Buffalo.**

Buffalo, N. Y.—Commissioner of the State Department of Health has reported to Governor Dix that the complaints alleging that a public nuisance exists in the abandoned canal slip between Main street and the Commercial slip, Buffalo, are well founded. He says that the unsightly sewage matter and offensive odors are detrimental to the health of a number of residents in that vicinity and recommends measures that will bring about their permanent abatement.

**Street Car Helps Clean Sewer.**

Youngstown, O.—A novel and successful manner of cleaning the upper end of the Grace avenue sewer was adopted the past few days by the city sewer men engaged in the work. A large chain was employed to loosen the deposits in the sewer pipe, and when it was pulled through the sewer the material was loosened. On several occasions the windlass the men used was not capable of pulling the chain, and the men waited until a Park & Falls car came along. The chain was attached to the rear of the car and the chain pulled through. This procedure was carried out until the sewer was cleaned.

**Infected Rats in New Orleans and Philadelphia.**

Washington, D. C.—Officials of the Public Health and Marine Hospital Service have made plans to take additional precautions to prevent bubonic plague from breaking out in New Orleans, where an infected rat was discovered a few days ago. They received a report that a careful examination confirmed the discovery that the rat was a plague carrier. Three surgeons are now in New Orleans and another will be sent there this week with trained men for the killing of rats. The belief is held that the plague rat did not come from San Juan or Havana. One more death was reported in Havana July 29, but a case which was supposed to be plague turned out to be something else. In San Juan there was one additional case, which brings the total up to 49 cases and 25 deaths. Surgeon-General Rupert Blue, in charge of the Marine Hospital Service, said that he had not yet received any report of the find of a rat in Philadelphia that had been infected with the bubonic plague. He added, however, that he was not surprised to hear that one of the rodents carrying the germs had been found in that city. He had been advising precautions ever since 1908, and it was not surprising in the great spread of the disease that some rats bearing the germs had gained access to American ports. The thing to do, however, in his opinion, was to confine the germs to rats and exterminate them.

**Bradley Beach Enters Neighbors' Sewer Fight.**

Bradley Beach, N. J.—This resort has entered into the sewer fight between Ocean Grove and Neptune Township. Mayor William E. Macdonald, of this place, has directed Attorney James D. Carton to apply to the courts for an injunction restraining Ocean Grove and Neptune Township from emptying sewage into Fletcher Lake. Since Ocean Grove stopped Neptune Township from using the former's pipes for its sewage the township has used as an outlet Fletcher Lake, which adjoins Bradley Beach.

**Sewage Outlet No Longer Remote and Isolated.**

Los Angeles, Cal.—That "remote and isolated" spot on the beach where, a few years back, it was believed the city sewage could be deposited in the ocean for decades without complaint, now seems to be an attractive place for beach homeseekers according to the discoveries of County Health Officer Sawyer. He finds the disposal all that it should not be and he has made a report to the supervisors and to the State Board of Health, which restores the outfall sewer to the domain of active disturbances. If the county authorities press matters, as they did with the garbage disposal beyond Covina, Los Angeles may soon be forced to provide a system of settling tanks or other treatment to eliminate what may be a nuisance, subject to injunction. Dr. Sawyer says filth appears all along the beaches near the disposal point.

**Says Carbolic Acid Is Better Than Soap.**

Boston, Mass.—Dr. John J. Mallowney, of the Boston Board of Health, recently declared soap a carrier of virulent germs and a menace to health. "I believe that common soap, particularly the sort that is used for the washing of utensils which are food containers, is a carrier of micro-organisms which are a menace to health," he said. "No animal soap should be used in cleaning milk cans or other receptacles for foods, for the greater portion of such soaps are made from the carcasses of diseased animals which have been condemned by the Government inspectors. There is danger in the indiscriminate use of toilet soaps in public places. Employees in large establishments accumulate a remarkable collection of micro-organisms in their various occupations and transmit them to the lone bar of soap, and thence to those who use it subsequently. Careless persons who do not rinse the accumulated lather from the cake after using it assist in the transmission of these impurities. In recent years antiseptic soaps have been put on the market, but it has been found in hospitals that a diluted solution of carbolic acid is more effective in cleaning the hands or clothing, and requires no more time to apply.

**WATER SUPPLY****City Water Works Transferred to Company.**

Sullivan, Ind.—The City Council has passed a resolution providing for the transfer of the water works system owned by the city of Sullivan, to the Sullivan Water Company, a corporation composed of Vincennes capitalists, which will install a new system this year. Under the action of the council, Judge W. H. Bridwell, of the Circuit Court, will appoint appraisers who will place a valuation on the property before it is transferred. The new company has a franchise for twenty-five years and a contract with the city for twenty years.

**Fifteen Years' Idleness Demoralizes Valve.**

Milwaukee, Wis.—City Engineer Mesiroff and other officials who attempted to inspect the shore line tunnel at the pumping plant last week were unable to do so, and another attempt will be made. The big valve next to the shore shaft could not be closed, as it had rusted badly since it was last closed some fifteen years ago. The officials worked all one night, but even with a twelve-inch pump going were unable to lower water in the tunnel below three and a half feet, while the current was so strong that it made it impossible for a man to go through the tunnel. Other pumps will be attached at the next attempt in an effort to clear the tunnel to permit its inspection in accordance with the request of Mayor Bading.

#### Cohoes Is Without Filtered Water.

Cohoes, N. Y.—This city east of the Erie canal is without filtered water notwithstanding the fact that a new filtration plant was only recently installed at an expense of \$150,000. When the water is too high or too low as at present the pumps can not be run. Superintendent of Waterworks Albert T. Kniffen says that the only remedy would be plenty of rain, although there is no danger of a shortage of water because plenty of the unfiltered article can be run into the lower service by gravity. Residents are naturally complaining because their water taxes were increased about fifty per cent. to meet the expense of filtration, which is not proving successful. The Water Board has notified residents to boil the water.

#### Water Shortage in Santa Monica.

Santa Monica, Cal.—The City Council will be called to give consideration to the protest of citizens as represented in resolutions publicly adopted dealing with the water question. The present shortage, which amounts practically to a famine in certain parts of the city, is responsible for the prayer that a committee be appointed to examine witnesses, take testimony and fix the responsibility. Relief is also asked from the payment of bills for service not rendered. The Council at its last meeting had appointed a committee to make thorough investigation into the water shortage question and that body will be unable to do but very little more until that committee shall have made its investigation and submitted its report. The resolutions adopted ask that the feasibility of establishing a municipal plant be inquired into, provided the fact is established that an ample supply of water is obtainable. The Owens river water question will also be exploited, with a view to learning what terms a supply may be obtained from the Franklin canyon reservoir back of Beverly. The water company is working night and day in an effort to connect an auxiliary supply with the mains.

#### Some Officials Inspect Atlantic City Water.

Atlantic City, N. J.—City Health Officer Guion and Superintendent Van Gilder of the Water Department have made their annual inspection of the water plant at Absecon and the water shed further back in the county. The two officials spent the entire day looking over the pumping station, the artesian wells and the several ponds which furnish the bulk of the water supply. "The water plant never appeared to be in better shape," stated Dr. Guion lately. "The supply is adequate and the whole water shed seems to be in the best of shape in every way." Samples of the water from the various ponds and wells were taken by Dr. Guion for analysis. This is done every month to test the quality of the water which is being furnished to the city.

#### Engineer Advises Filtration.

Hamilton, O.—In company with Engineer A. W. Newleik, representing the Jewel Water and Improvement Company, of Chicago, Service Director J. H. Holzberger, Superintendent Harry Thompson and some few others made an inspection of the water works supply basin and wells therein contained. After viewing the situation Engineer Newleik is of the opinion that the contamination in the city water comes from surface seepage into the wells and that the only solution of the problem is filtration. He believes that it would be folly to drive new wells in any other location, as there would only be a recurrence of the same trouble which exists now. It is from this surface seepage, he claims, and the proximity of the wells to Old river and the Miami river, that the algae is carried into the city water and thence to the Wilson's Hill reservoir, where it vegetates and contamination results. Filtration, he therefore believes, is the only solution of the difficulty. A filtering plant sufficient to meet the necessities of this city in connection with the water works as already established would probably cost about \$80,000, but in his estimation it would be money well invested. The wells could then be abandoned altogether, the water taken direct from the river and after its chemical treatment through the process of filtration it could be furnished for consumption with a purity of practically 99 per cent.

#### City of Louisville's New Pump at Work.

Louisville, Ky.—The Louisville Water Company's new steam turbine driven triplicate pump was put to work on trial last week and in twelve hours lifted 15,000,000 gallons of water. It will replace two old style pumps and is said to be the first combination of this sort in use in the country.

#### Water Question Worries Durham.

Durham, N. C.—The big thing before the city authorities right now is the question of a new contract with the Durham Water Company. The company wants to have the term of its franchise extended and the water and hydrant rates maintained for a number of years, claiming that this should be granted in consideration of the expenditures of \$150,000 which is proposed for increasing and improving the plant this year. The city authorities are of the opinion that there should be a reduction in the hydrant rates, and a shorter period of the franchise. The various committees are meeting daily and trying to get together on the various clauses of the contract, and it is thought that an agreement will be reached soon.

#### Small Towns Waste Water.

Walden, N. Y.—President of the Board of Water Commissioners Sanford Abrams and the clerk of the board, Ezra Young, were recent visitors to John L. D. Eager, Superintendent of the Montgomery pump station. Montgomery, it is stated, is experiencing the same difficulties which confronted the Walden commissioners previous to the installation of water meters. There is said to be tremendous waste of water through carelessness of consumers. In Walden with 800 consumers it requires 70,000 gallons a day to supply the demand, while in Montgomery with 150 consumers it requires 60,000 gallons a day. Wallkill is also meeting with the same difficulty, and it will also install meters at an early date.

#### Advises Further Means of Protecting Water.

East Hartford, Conn.—Superintendent of Water Works J. H. Walsh has had a sample of the water such as residents are drinking at present examined at the chemical laboratory at Middletown. The water was taken from the north fork of the Salmon brook and Chemist James A. Newlands, who made the examination, says that the water is low in mineral content and is quite soft. The figures for organic constituents are low and the chlorine is about the normal for that region. The numbers of bacteria are high, but there was no evidence of the presence of disease germs. As the reservoirs are very small, allowing only a short storage period, it is likely there will be considerable variations in the numbers of bacteria due to the effect of rains, spring freshets and the like. Mr. Newlands reports that the supply appears to be safe for drinking purposes at this time, but suggests that the question of increasing the storage capacity, or the installation of some other protective measure to guard against accidental contamination of the stream with disease germs, be taken up without delay.

#### Victor Was Without Water.

Victor, Col.—A cavein of one of the shafts of the Stratton Independence mine last week broke the city water pipes, which go through Stratton ground, and the mine and city water was shut off. One million gallons flowed into the mine workings and for a short time threatened to drown thirty-five men on the second and third levels.

#### Claim Right to Swim in City Water.

Battle Creek, Mich.—Cottagers and visitors at Lake Gogawac, the city's principal summer resort, are alarmed by the decision of the city to prevent bathing in the lake, from which the city gets its drinking water. The Common Council is willing to stand the expense of a lawsuit to see the matter through. The Supreme Court has already decided that property owners own the riparian rights in front of their land and can swim all they choose. The city, however, will attempt to reach them through sentiment.



**New Water System.**

Lincoln, Cal.—The work of installing Lincoln's new water system is progressing favorably and will be rushed to completion. The old system was laid with joint pipe, but that now being used is the very latest screw pipe. About 7,000 feet of 12-inch pipe is to be laid. The old mains are to be left in the ground, as the City Trustees do not consider it worth the expense to unearth them.

**Perth Amboy Water Mains Sound.**

Perth Amboy, N. J.—In the report of the Water Works Equipment Company, of New York, it is stated that there are no leaks in the water mains of this city. Representatives of the company have just completed an examination and found everything in excellent condition. It was charged that the ascending main, reservoir and many of the city mains leaked. It will require another month's time to complete the investigation. The examiners say they made a careful examination of the reservoir and found that it is water tight in every particular. The ascending main from the pumping station at Calhoun street to the reservoir on Prospect street was also inspected. The test of the engines at the pumping station showed that the loss was extremely light. The examiners will make tests this week of the mains under the canals and creek in this city, and will also test the smaller mains about the city. It is common report that many of the smaller street mains about town leak, with the result that the pressure is not very great, hardly sufficient to get a flow of water on the second floor when the taps are turned on on the first floor of a residence.

**Preparing to Tap New York Aqueduct.**

Tarrytown, N. Y.—The Consolidated Water Company, which supplies the villages of Dobbs Ferry, Hastings and Scarsdale, has issued orders to its consumers to boil their drinking water, as the reservoir was so low that the water had a bad smell and taste.

The company also admitted that it was facing a famine, for it had only three weeks' supply on hand at the most. Its situation is so serious that it began work on the removal of a large pump from Mamaroneck to Ardsley, where it will be placed in operation at once, so as to be ready to pump from the Croton aqueduct as soon as the present supply is exhausted. The company has again obtained permission to tap New York City's supply if the occasion arises. Although the company in the spring raised its dam eighteen inches the end of its supply is in sight. Unless very heavy rains come the drought will be worse than two years ago, when the villages went without water for months.

**Boil Drinking Water, Says Health Board.**

Chester, Pa.—Owing to a decided increase in the number of bacteria in the tap water at the present time, the Chester Board of Health advises the boiling of all water intended for drinking purposes. During the early part of this month Dr. J. R. Taylor Gray, Jr., the bacteriologist, examined the tap water, which showed a very satisfactory condition, but since then there has been a steady increase in the number of bacteria, until the last examination, which was held last week, which showed that there was a larger number of bacteria in the water. There was such a decided increase that the health authorities deemed it advisable to warn the people to boil all water for drinking purposes. The health officials state that this period of the year is the time when typhoid fever is greatly prevalent. Although there has been only seventeen cases of this disease since the first of the year, no deaths have occurred.

**City Water Polluted.**

Reno, Nev.—It is reported, according to published statements in a local paper, that the source of Reno's city water supply is being used as a bathtub by 500 construction camp laborers. The Utah Construction Company is employing this number of workmen on its work of double tracking the Southern Pacific Railroad at a point above where the city diverts its water supply from the Truckee River. These men perspire freely and it is perfectly natural that they must bathe. There is no other place for such ablutions than the river.

**STREET LIGHTING AND POWER****Council Wants Light on Lights.**

Hightstown, N. J.—Members of the Council have demanded from the electric light company an explanation of why the city is charged a 35-cent rate for a 32-candle-power electric incandescent lamp, when the same lamp is supplied to Peddie Institute and other private consumers for 20 cents. Council also points out that the town of Cranbury, near here, is getting the same lamps and illumination at a 10-cent rate.

**Mayor Argues for Water Power Plant.**

Fort Dodge, Ia.—Mayor J. F. Ford has written a letter to "The Messenger" stating the argument as he sees it in favor of the construction for municipally owned dam and power plant on the Des Moines river. As corroborating the feasibility of the plan he quotes from the experience of Granite Falls, Minn. This plant, completed in 1910, cost \$53,063, according to the official report. The first annual report showed a revenue of \$10,729. No charge was made for city lights or supplying water to hydrants. The cost of operating the plant is not stated in figures, but is said to be very small. The experience of Winnipeg, Manitoba, is also quoted as an instance of the success of municipal ownership of this character of plant.

**New White Way in Fall River.**

Fall River, Mass.—Main street, from Central to Pocasset streets, is now literally a blaze of glory, since the turning on of eight new and ornamental electric lights between those points. The lights are a new design of the electric lighting company, and have been installed with a view to impressing the city authorities and citizens generally with the advantages of such a system in the centrally located business sections of the city. They certainly make a great difference in the appearance of the section lighted by them, and if they are permanently adopted, it is probable an extension of the plan to other streets in the centre will be considered.

**Lebanon Considers New Lighting Proposition.**

Lebanon, Pa.—The Police Committee, with the assistance of Prof. Wm. Estes of Lehigh University, have prepared a complete set of specifications containing eighteen items on which bids will be asked for street lighting, provided the necessary legislation goes through. City Solicitor Graeff stated at a council meeting attended by many citizens that the specifications would have to be put in the form of an ordinance and regularly passed. The proposed contract may run for one, three or five years. Bids will be asked on 155 or more series alternating current enclosed arc lamps consuming 480 watts per hour and 175 or more 38-watt series Tungsten lamps.

**Green Vines Around Lights.**

Duluth, Minn.—John A. Stephenson is a believer in the City Beautiful. Mr. Stephenson worked hard for the installation of ornamental lighting standards on West First street. Now he is improving on the idea. His aesthetic sense is aroused, and he has given visible expression to his feelings by the installation of miniature gardens on four of the lighting standards on the corner of Third avenue west and First street, having secured the hearty co-operation of the firm of French & Bassett and the tenants of the Kitchi Gammi club building.

People passing the corner last week were greeted by a surprising sight. Up around the top globe on the lighting standards gleamed the rich red of the geranium, and falling in graceful creepers were vines of a glorious green.

The four standards are ornamented as an example to the people owning property and occupying business places along the street. The standards on Hennepin avenue in Minneapolis are so ornamented and the flowers and vines add greatly to the appearance of the street. Mr. Stephenson would have the floral addition made to every standard in Duluth. He says the change would more than recompense those who might meet the expense.

### Cuts Water and Light Rates.

Gary, Ind.—The United States Steel Corporation, through its subsidiary, the Gary Heat, Light and Water Company, surprised the people by cutting gas rates from \$1 a thousand cubic feet to 90 cents; water rates, 25 per cent., and electric light schedules, 20 per cent.

### To Investigate Power Project for Washington.

Washington, D. C.—Col. Langfitt, the engineer officer in charge of the District water supply system, has taken steps to obtain for the benefit of Congress certain information in regard to the present water supply in the District. In this matter he is acting as the representative of the Secretary of War. That official is directed by a provision of the District of Columbia appropriation act approved June 26 last to investigate and report to Congress at the beginning of the next session "the efficiency of its source at the Great Falls of the Potomac river to supply the present and future needs of the United States and of the District of Columbia for water; also the availability of the water power at said Great Falls or vicinity, or between Great Falls and the District of Columbia, for the purpose of supplying light and power for uses of the United States and of the government of the District of Columbia, and to prepare complete plans, maps, specifications and estimates for the production, distribution and utilization of the maximum electrical power that can be economically created and employed for such uses, including street lighting in the District of Columbia." Twenty thousand dollars was appropriated for the purpose of the investigation. With the approval of Gen. Bixby, chief of engineers, Col. Langfitt will use that appropriation, or so much of it as it is necessary, in the payment of salaries and the purchase of material necessary to the accomplishment of the work. He says he will employ expert hydro-electrical engineers to lay out and supervise the work, prepare the plans and estimates of the power plant and distributing system, to make the necessary surveys, maps of land, boundaries and topographic maps, and to investigate the amount of water available, etc. The engineers will be appointed in a few days, and the work will be undertaken with as little delay as possible.

## FIRE AND POLICE

### Better Pay for Policemen.

Philadelphia, Pa.—Director Porter has announced that he has under consideration an ordinance which would be presented at the next meeting of Councils to put the police force on a yearly salary instead of paying them by the day, as at present. He also intends to have their salaries fixed at the rate of \$1,200 per year, an increase of \$150 a year over their present pay. If the change is made it will mean that no time will be taken off the men for sickness, as has been done in the past.

### Jacksonville Police Now Under Mayor.

Jacksonville, Fla.—Carrying out a threat made when a controversy arose between the bond trustees and the City Council, the latter body passed an ordinance placing the control of the police department directly in the hands of Mayor Jordan. The bond trustees claim that this action is not in keeping with the city charter and a legal battle is promised. The trouble arose over the arrest of a City Councilman by a policeman and the refusal of the bond trustees to suspend the officer.

### Object to Fire Escapes on Aesthetic Grounds.

Erie, Pa.—Since the agitation by city officials and councils began as to the 168 buildings in Erie minus fire escapes, which the State law requires to have them, the office of the fire commissioners has been flooded with requests for information on the proposition from property owners. Oddly enough, the fire commissioners' office report that owners of buildings are not objecting to placing the fire escapes on their structures as the law requires on account of the cost thereof, but because they say these means of affording protection for human lives in case of fire will mar the "beauty" of the buildings.

### Co-operate in Effort Against False Alarms.

Chattanooga, Tenn.—Principal among the topics discussed recently by Chattanooga fire captains at their regular meetings is the trouble experienced because false alarms are often turned in through American District Telegraph boxes. The managers of that system are co-operating with the department and a remedy will soon result, it is thought. One method adopted is the replacing of all boxes with another and different style. In instances where the boxes are located in the yards of factories, etc., a heavy wooden case is being put around the metal box. Thus, no one save the holder of a key can get to the box and turn in an alarm without considerable trouble and noise incident to breaking the outer covering.

### Cities Need Higher Fire Protection Levy.

Des Moines, Ia.—A movement to allow cities to levy special taxes for fire departments is on foot among the cities of the State. Councilman F. T. Van Liew of Des Moines has called a meeting of secretaries of various commercial organizations to be held here during state fair week, at which time the proposition will be discussed. It is planned to draft a bill to be presented to the legislature, which if passed will legalize the assessment of special taxes. Councilman Van Liew called the meeting upon request of W. E. Holmes, secretary of the Sioux City Commercial Exchange. He says that all large cities in the State are facing the problem of modernizing their fire-fighting equipment and it is hoped that funds may be secured through the passage of a bill which all Iowa cities can support.

### Pleased With New Aerial Truck.

Perth Amboy, N. J.—Witnessed by several thousand people, the new aerial truck of the Protection Hook and Ladder Company was given its official test. Members of the Board of Aldermen and Acting Mayor Garretson were present to see that the specifications and guarantee were adhered to before officially accepting the apparatus. The new truck works to perfection. A thorough test was held showing the merits of the device. The apparatus was taken from the house at 7.15 o'clock with William Pettey in the driver's seat and George Mead at the wheel. At the corner of State and Smith streets some of the features of the apparatus were shown. The automatic ladder was placed on top of the American building and Joseph Hornsby, captain of the company, was the first one to ascend, closely followed by Jay B. Franke and Bert Gillman. Then the seventy-five foot extension ladder was used straight from the wagon and Jay Franke ascended alone. After the demonstrations at the principal corner, the new apparatus, together with the hose wagon and steamer of Lincoln Engine Company, proceeded to Jefferson and Maple streets. Here the forty-foot ladder raised itself in four seconds. The steamer was attached and a stream was thrown from the top of the ladder. It was surprising with what rapidity the ladder is adjusted and how easily the hose is handled at such a height. The test was completed at 8.15 o'clock. Acting Mayor Ferd Garretson, Chief Frank Comings and members of the Board of Aldermen are much pleased with their purchase. The new apparatus will go into commission at once. While raising the ladders the other night several of the teeth of one of the wheels were ripped off and will be replaced at once. The accident does not place the truck out of commission.

### Insurance Commissioner's Condemn Parlor Match.

Spokane, Wash.—The deadly parlor match was vigorously condemned by the National Convention of Insurance Commissioners, which adopted a resolution recommending the enactment by each state of a law modeled on the Louisiana statute, forbidding the use of the single dip, white phosphorous match. The convention also endorsed the proposal of the Fire Marshals' Association, looking to the adoption of a uniform Fire Marshal law.



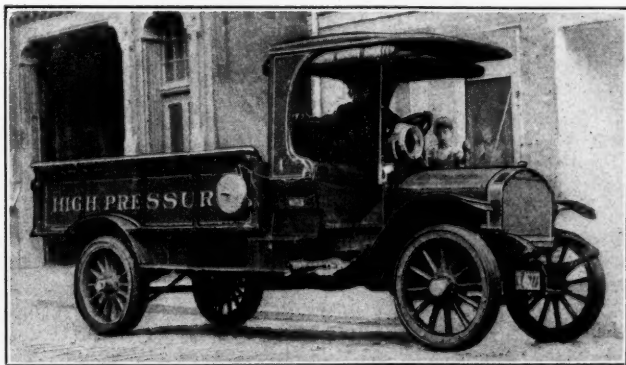
## AUTO APPARATUS NOTES

Los Angeles, Cal.—Two motor-driven combination pumping engines and hose wagons were ordered last week by the council when they let the contract for the machines to the Gorham Fire Apparatus Company. This is the third machine of the kind to be purchased by the city. The machines were quoted at \$10,000 each, but by taking the three of them the city receives a reduction of \$750. Bids for the three engines were received last March, but the supply committee was a little afraid of them because they employ a turbine engine instead of the usual reciprocating engine. One of the machines was ordered purchased and the contract for the others held up until the first one could be demonstrated. The engine purchased last spring is now ready for delivery and a number of the councilmen went to San Francisco to look at it. They were so pleased with the demonstration that on their return the supply committee ordered a resolution letting the contract for the other two engines. They are 135 horsepower, six-cylinder type, and are capable of throwing 1,100 gallons per minute. They are to be delivered within 150 days after the signing of the contract.

Erie, Pa.—The chassis of the police motor ambulance-patrol arrived in Erie last week from the Oakland Automobile factories in Michigan, and was at once taken to the plant of the Keystone Carriage Company, Eighth and Holland streets, where the body will be built and placed on the truck. The chassis is a 45-horsepower machine and built to carry a body which accommodates 14 persons, 10 inside, two on the steps and two on the driver's seat. It is expected the car will be ready for use in about a month, since it will require about that time to build and paint the body, the latter process requiring most of the time. The car will supplant the system now and for years past in vogue in the local police department whereby a horse-drawn patrol wagon, hired by the city from private owners, has provided the only means the department had available for use in handling its business. One of the excellent features of the new car is that it has ambulance facilities such that the police can handle the injured within its own jurisdiction. Heretofore the department has had to call private ambulances for use in police cases.

Springfield, Mass.—The efficiency of this splendid motor department was put to a severe test on the 4th and 5th of July passed and in the opinion of Chief Daggett, it unquestionably saved the city from a serious conflagration. "On the Fourth we had a total of 18 alarms," says Chief Daggett, "which were scattered all over the city, while on the 5th 12 alarms were rung in, of which half were received in rapid succession between noon and 4 o'clock in the afternoon, necessitating such rapid response on the part of the department that the apparatus on several occasions did not have time to return to the engine house between calls."

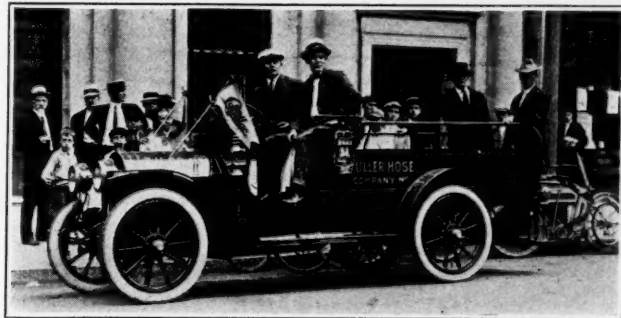
Philadelphia, Pa.—That Philadelphia has quite an extensive high-pressure fire-fighting pumping system has been brought forcibly to the minds of many people on the streets in the last few weeks, when they heard the clang of a bell, sounding very much like a fire engine's, and saw a heavy



Courtesy Philadelphia Record.  
HIGH PRESSURE SUPPLY WAGON.

automobile truck, filled with tools, dash past them, bearing the sign "High Pressure Service." This is the new repair truck shown in the illustration and recently pressed into use, one of three visible signs of the mighty system which spreads under the streets in the busiest sections of town.

North East, Pa.—North East's new auto fire truck which was built for the Fuller Hose company, by the Keystone Carriage works, Erie, Pa., shows Chief C. H. Diehl, of the



Courtesy the Erie Daily Times.

FULLER HOSE COMPANY'S NEW AUTO TRUCK.

North East fire department, on the seat beside Second Assistant Foreman Vance Rouse, who is driving the truck. On the far side of the rear step is shown Chief of Police John Alexander, who is also a member of the hose company, and beside him stands Foreman Earl Sparling, of the Fuller Hose company. The fire truck is pronounced perfect by all who have inspected it. It weighs, with six men, 4,570 pounds.

Baltimore, Md.—That the horse is still a factor in the Fire Department was conclusively demonstrated when an alarm was sounded from a box at Gay and Mott streets one day recently. At the junction of Lexington and Gay streets No. 1 high pressure automobile hose wagon, met the hose wagon, horse drawn, of No. 4 Engine Company, Lexington street near Calvort. The auto apparatus was traveling in a direct route, whereas the hose wagon from No. 4 had to make a sharp turn rounding Gay street, at the narrowest angle of that uneven thoroughfare. With consummate skill the driver of No. 4 guided his horses into Gay street, gliding in and out between stalled electric cars and wagons. Then came the real thrill. The horses hauling No. 4, spurred on by the rivalry of their automatic opponents, raised their foamy nostrils in the air. The harness fairly rose from their backs. The race was on. The auto wagon had the "inside position." This was no deterrent to the flying steeds. Passing No. 6 Engine House the horses were three lengths in the lead. To clinch the victory, they reached the scene of the fire with several lengths separating them from the pulsating but friendly adversary.

San Francisco, Cal.—The first piece of motor-driven fire-fighting apparatus to be used by the city of San Francisco was a Pope-Hartford two-tank chemical. The car was recently given a severe test on San Francisco's steepest grades, climbing an 18.1 per cent. grade on California street on high gear at the rate of seventeen miles an hour. This hill is located in the Chinatown section of San Francisco. The car is propelled by a Pope-Hartford motor capable of developing sixty-three horse-power, which is more than ample to negotiate any grade that fire-fighting machinery will be required to climb in San Francisco. It is equipped with a powerful electric searchlight, and, in order to clear the way ahead for the speedy machine, it is equipped with a locomotive bell and a siren. The experiments which have been made by Chief Murphy of the San Francisco fire department are a convincing proof that the motor-driven apparatus will do even better work in San Francisco than the other kind. The steepest hills have been negotiated with ease, and the general reliability of the motor truck now is so firmly established that there is no longer any supposition of "breaking down."

## GOVERNMENT AND FINANCE

### City's New Pay Check System in Operation.

San Francisco, Cal.—The new city pay check system devised by the efficiency committee of the Supervisors will go into effect this month and the employes of the various departments will no longer be forced to make a monthly trip to the City Hall, as was formerly necessary, to get their wages. Under the new arrangement, worked out in conjunction with the Auditor, Treasurer and President Walcott of the Civil Service Commission, the men will receive their pay on the job in the form of negotiable checks. These checks may be cashed at banks or stores, or presented in person to the City Treasurer, if desired. They will be handled through the clearing houses and returned to the Treasurer for cancellation. Heretofore employes have lost several hours of one working day each month in making a trip to the City Hall, and it is estimated that the city will save \$10,000 monthly in working time by the new system.

### To Vote in Tents.

Los Angeles, Cal.—Election expenses are expected to be materially reduced by the use of tents for polling places, the council having appropriated \$3,500 for the purpose of co-operating with the county in purchasing the necessary equipment. Some time ago, several members of the council, accompanied by members of the board of supervisors, met and investigated the proposition. All agreed that a big saving could be made by purchasing tents and a beginning will be made at once.

### Civic Commission of Leading Men Is Proposed.

San Antonio, Tex.—The idea of a civic commission, consisting of the leading men of various lines of endeavor in San Antonio, appointed by the Mayor and serving without pay to investigate problems which may arise and advise the City Council thereon, was advanced at the luncheon given by the Chamber of Commerce at the Menger Hotel. There were upward of 150 members of that body present, with whom this projected commission found favor, and it is deemed probable that when the idea has been fully elaborated and worked out it will be presented to the new city administration with a request for its co-operation. Such a commission, it was suggested, could take up the river problem, the street problem, the city plan problem and the various others, bringing to them expert and careful attention, devoting time and experiment, and from all suggestions made, select the best, endorse it and recommend to the Council its adoption.

### Warsaw Plans Vehicle Tax.

Warsaw, Ind.—A wheel tax for Warsaw is now under consideration by the City Council. Councilman W. C. Cronon, chairman of the Street and Alley Committee, will present a new traffic ordinance and it will provide for a tax on automobiles, drays and other vehicles.

### Accept Provisions of Workingmen's Compensation Act.

Taunton, Mass.—The Committee on Streets and Bridges is considering the question of accepting the provisions of the Workingmen's Compensation Act and applying it to the department. The mayor is a sub-committee to investigate more fully into the provisions and requirements and will report at an early meeting. The Sewer Commission has voted to accept the act, and the policy has been awarded to Harrison W. George of this city. The papers are expected to arrive in a few days. It is said that the city will probably extend the protection to itself through other departments. If the city neglects to accept the provisions of the act the employe has a right to bring action in court for every accident that he may suffer, and the city is denied the use in defense of the old common law provisions of exemption from liability, including those of contributory negligence on the part of the workmen and of the neglect of a fellow servant, which in the past have saved the city from being mulcted in suits quite frequently.

### To Determine City's Right to Collect Toll.

Pittsburg, Pa.—Test cases to determine whether the city has the right to collect tolls from companies for wires, pipes or similar public service lines crossing city spans will be instituted. Controller Morrow has filed praecipes against various public service corporations aggregating \$65,000, in the name of the Monongahela Bridge Company, the Point Bridge Company and the Tenth Street or Birmingham and Pittsburg Bridge Company, all owned by the city. Some time ago at a Council committee meeting the subject was brought up, and it seemed to be the opinion that the city should receive some recompense for the privilege of stringing wires or laying pipes across the city's spans. If the Court awards judgments in favor of the city, it is declared, other actions of similar nature will be proceeded with.

### Question as to Lowest Responsible Bidder.

Denver, Col.—The action of the Board of Public Works in awarding a sidewalk contract to a bidder who was not the lowest bidder may have the effect of invalidating the bonds for sidewalk district No. 19. The provisions of the charter regarding the letting of public improvement contracts is said to be plain. The charter provides that the lowest responsible bidder is to be awarded the contract. The former city attorney held repeatedly that the fact that a man deposited a certified check with the Board of Public Works, which check was to guarantee the faithful performance of a contract, made that man a responsible bidder. During the eight years of the previous city administration there was never a case in which public improvement contracts were not let to the lowest bidder. The charter seemed plain on the matter, and, as the residents of the improvement districts paid the bills, it seemed that the work should always be done as cheaply as possible.

## STREET CLEANING AND REFUSE DISPOSAL

### Will Enforce Ordinance Regarding Receptacles.

Toledo, O.—Officials of the city health and street departments at a conference decided on a joint campaign by which it is hoped that more satisfactory garbage collections will be obtained in the residence sections. Stricter enforcement of the ordinances relating to the throwing of rubbish into alleys will also result. The conference was called by Mayor Whitlock and was attended by Health Officer Becker, Service Director Cowell, Safety Director Mooney and Superintendent of Streets McNerny. "At least 80 per cent. of householders are not using the closed receptacles," said Mr. McNerny. "Lard cans, tin pails, paint buckets and even useless trunks are used." Receptacles that do not comply with the Health Department's ordinance will be confiscated.

### Citizens Must Clean Yards of Weeds and Rubbish.

Chattanooga, Tenn.—The Police Department, the Department of Streets and Sewers and the Health Department have joined in an effort to rid the city of the healthy "weed crops" which adorn the front yards of many Chattanoogaans, and notices will be issued in the next few days, the non-compliance of which will result in their arrest. Notices ordering citizens to remove tin cans and other debris from their premises will also go forth from the departments. Within the last week many complaints have reached the various city offices, and the complaints were confined to no particular locality, about the careless manner in which many of the citizens maintain their yards, and in each instance those registering the complaint asked that immediate relief be given. Acting on the complaints, the three departments will undertake to clean the town, even though it results in the arrest of offending citizens. Every person, however, will be given ample opportunity to do the work themselves, thus saving the double cost of the city work and a fine in police court.



### New Sanitary Code Completed.

Dallas, Tex.—Assistant City Attorneys Richardson and Allen have just completed a draft of an ordinance creating the office of Chief Sanitary Officer and providing a sanitary code for the guidance of the citizens of Dallas. J. B. Wills, who already has the work of disposing of trash and garbage in hand, will be dignified with the title this ordinance carries with it, after its final adoption by the Commission. Commissioners Lee and Bartlett were named as a committee to have such an ordinance prepared and submit it to the Commission with such recommendations as they deem necessary. The Chief Sanitary Officer is to be named by the Mayor for a period of one year. His salary shall be fixed by the Commission and a bond of \$5,000 will be required of him. He is not permitted to receive any fees of any nature in addition to his salary for the performance of the duties required of him. The ordinance provides that the Chief Sanitary Officer shall have general supervision of all sanitary officers of the city of Dallas and be responsible for the enforcement of the sanitary laws. He shall have full power to make arrests for any and all violations of the sanitary ordinances and is vested with full and complete authority to go upon premises and into buildings of all property owners for the purpose of ascertaining sanitary conditions.

### Distribution of Oil Is Not Satisfactory.

Brooklyn, N. Y.—Brooklynites seem to disagree very seriously on the question whether oil is beneficial or detrimental to the streets of the city. Residents along the Shore road are up in arms because the street has not been oiled this year; while a short distance away people residing on Cropsey avenue are complaining because there is too much oil there. Millionaire residents along the Shore road, which is one of the most fashionable driveways in the city, have already complained to the Department of Parks about the filthy condition of the street.

Shore road is so thick with dust that it is impossible to sit on the stoops along the driveway or even to leave the windows open. Not only has oil been lacking, but the complainants say that for ten days at a time the street has not even been watered. Formerly there were many people who resorted to the benches on the driveway, as a cool and comfortable place, but now the thick dust makes it impossible to enjoy sitting or even walking along the street.

Quite a different state of affairs is to be found along Cropsey avenue. There the street has been so thickly oiled that it lays in pools all over the roadway. Every passing automobile showers pedestrians with the viscid fluid. The sidewalks are so covered with the oil that it is tracked into the homes of the wealthy residents along the avenue and is spoiling many costly rugs and carpets. It is almost impossible to get to the ocean without wading through a veritable sea of oil, for access to the waterfront can be had only by crossing Cropsey avenue. The oil is also very objectionable to automobilists who go through Cropsey avenue, particularly to the wealthy residents of Sea Gate and Bensonhurst, who have to use that street to go to and from their business.

## RAPID TRANSIT

### Want Concessions for the Children.

Portsmouth, Va.—The Street Committee of the City Council has decided to take some action looking toward securing concessions from the Virginia Railway & Power Company for the school children of the city. The committee has decided to write to the traction company and ask if it will not be possible to get special rates on the cars operating over the local street car divisions. The committee has been instructed to confer with the traction company in regard to that matter. At its last meeting, however, it was decided to address a letter to the company in reference to special rates for the children, with the idea, if possible, of getting the concessions so that they may be available by the time the city's schools reopen for the term in September.

### Revive Salem-Bridgeton Trolley.

Bridgeton, N. J.—A trolley line is projected from Bridgeton to Salem. The proposed route is through Shiloh, Roadstown, Greenwich, Canton and Quinton. For months three firms have been operating auto buses between the two cities and a motor wagon is operating from Bridgeton to Greenwich. All are doing a profitable business.

### Interstate Tunnel Planned for Trolley Cars.

Camden, N. J.—Plans for the construction of a tunnel under the Delaware river, connecting the trolley system of Philadelphia with the cars covering Camden, Gloucester and Burlington counties, and their connections, have been revealed by Transit Commissioner A. Merritt Taylor of Philadelphia, who, in announcing his view of such a project, declared that a complete report on the subject would be made by him within a year to the Mayor and Councils. Commissioner Taylor, in declaring that he favored a tunnel, said that he would suggest that the States of New Jersey and Pennsylvania join in defraying the expense of the project. If this plan failed, he said that he would endeavor to enlist Philadelphia and three New Jersey counties in the project. He expressed the opinion that Camden, Gloucester and Burlington counties, in New Jersey, should divide part of the cost, inasmuch as they would be benefitted fully as much as Philadelphia by the construction of a river tunnel. It is roughly estimated that the cost of such a tunnel would be \$8,000,000. Should the latter plan prevail, this city would be expected to pay about \$4,000,000, while the three Jersey counties would give a similar amount in thirds. The distance of the prospective tunnel would be a mile and a half from terminal to terminal, and Mr. Taylor thinks that in connection with the tunnel there should be a delivery loop from the proposed Broad street subway to connect with the Jersey tube.

### Progress on New York Subways.

New York, N. Y.—Wednesday, July 31, was the first anniversary of the beginning of work on the Lexington Avenue Subway. In the year which has elapsed great progress has been made on the Lexington Avenue line, which will be the backbone of the new subway system.

From the report of Alfred Craven, Chief Engineer of the Public Service Commission, on the progress of work for the month ending July 15, it appears that contracts have been let by the Commission for 12 of the 16 sections of this line, aggregating 41,407 feet in length, or about 8 miles, at contract prices totaling \$35,521,291.19. A total of 3,280 men are employed on the Lexington Avenue line. All of this is to be a four-track subway, and work is well advanced upon 10 of the 12 sections under contract, and is about being started on the other two sections, the contracts for which were executed only a few days ago.

As the total length of the Lexington Avenue line is 52,083 feet, or a little less than 10 miles, it is apparent that within one year the Commission has contracted for four-fifths of the work.

In addition to the Lexington Avenue line, work is also being vigorously prosecuted on the Fourth Avenue Subway in Brooklyn and the last section of the Centre Street Loop Subway in Manhattan. The Fourth Avenue Subway is a four-track road of about 4 miles long, and the Centre Street Loop Subway is also a four-track road of about 1½ miles long. The former is to cost about \$15,000,000 and the latter about \$11,000,000.

Taking all three subways, therefore, namely, the Lexington Avenue Line, the Fourth Avenue Subway and the Centre Street Loop, there is now under contract about \$61,000,000 worth of work upon 13½ miles of four-track road.

The only sections of the Lexington Avenue line remaining to be contracted for are Sections 1 and 1-A, extending from the Battery up Church and Vesey streets to Broadway; Section 4, in Broadway north of Bleeker street to a connection with the proposed B. R. T. subway up Broadway, and Section 7, in Lexington avenue between Fortieth and Fifty-third streets. These were delayed by reason of changing the contracts, but the Commission is pushing work on these changes and the revised contract will soon be ready for bidding.

## MISCELLANEOUS

### Stable Planned with View to Future Use as Garage.

Lynn, Mass.—Lynn is considering plans for a municipal stable. This stable has been a matter of controversy in the city government for five years, but the Municipal Council have now decided to let the contract. The stable is to be of steel and brick, three stories high, and will cost about \$75,000. It will be located on the West Lynn marshes. In this will be kept the horses of all the city departments, and the stable will be designed with the idea in mind that in a few years the stalls may be taken out and the building converted into a garage.

### New Playgrounds Prove Popular.

Norwich, Conn.—Since the Norwich Playgrounds Association opened its six playgrounds in the city on August 8th for the season the number of children at each has been constantly growing, so that the weekly average now is about 1,500. The Greeneville grounds in last week broke the record of attendance, showing 500 children there in the course of the week. This is an ideal spot for a playground, a grass-covered lot with shade, and is proving a big attraction. The grounds at Round Pond are also nicely shaded and have some grass, but the others are not so situated that they can have any grass for the children to play on.

### Municipal Grocery Meets Opposition.

Schenectady, N. Y.—A summons and complaint have been served on the city officials having the municipal grocery in charge which asks the Supreme Court to restrain the Comptroller and others from carrying on the socialistic venture. Daniel V. Maxwell, who figured in the recent ice injunction, is the plaintiff in the proceedings. The complaint states that the city officials have sold goods to people living outside of the city. The case will probably be carried to the higher courts by the city officials if it is defeated in the first instance.

### "Municipal Record" Makes Its Appearance.

San Jose, Cal.—The first issue of the San Jose "Municipal Record" has appeared. It is a monthly publication which will be devoted solely to setting forth facts of interest concerning the business of the city. In the initial issue a host of interesting facts and figures is given, each department of the city government being treated by the head of this division. The first article and one of the main features is the inaugural address of Thomas Monahan upon his assuming the mayor's seat three weeks ago. It is the intention of the publishers to set forth each month the business of the city in such a way that all may know what is going on in the city hall, and to do this in a much more elaborate manner than it is possible to give it in the daily press. From the typographical viewpoint, the "Record" is pleasing, it being printed on a heavy paper, with the illustrations all in brown tones. The paper will be mailed anywhere in the city for 50 cents a year, or it may be obtained by any taxpayer who applies at the city hall.

### City Will Give Cheap Dances.

Cleveland, O.—To fight the dance hall evil the city is preparing to conduct municipal dances under the supervision of city employees. Admission will be three cents a dance. Dance floors will be put in shelter houses at city parks. The Edgewater dance hall will be opened in two weeks. Workmen are already laying the floor in the shelter house, and as soon as it is opened dances will be held every evening except Sunday. "This is just a starter," Park Secretary Sindelar announced. "We shall start dances in Brookside, Gordon and Washington parks at once. The shelter house at Garfield is too small, but might be enlarged." "We must carry this enterprise further and open dance halls in the crowded districts next winter," said City Dance Hall Inspector Bartholomew. "We made experiments at Hiram House with such dances last winter and succeeded admirably." Park attaches will have charge of the tickets and the city will have a floor manager to regulate the dancing and the music.

### Memorial Organ Installed in New City Hall.

Portland, Me.—The Kotzschmar Memorial organ, presented to the city of Portland by Cyrus H. K. Curtis has been installed in the auditorium of the new City Hall. Mr. Curtis conceived the idea of presenting the city with a great organ to be placed in the new auditorium which



Courtesy Portland Evening Express.

THE KOTZSCHMAR MEMORIAL ORGAN.

should also be a memorial to Prof. Herman Kotzschmar, long honored and beloved of Portland people and famous as a master of music. An order was placed with the Austin Organ Company of Hartford, Conn., for an organ adequate for the space in the auditorium that would be provided by the architects. The orders given by Mr. Curtis implied that the organ should be the best that money could produce. Although he at first understood that such an organ could be installed in the auditorium for about \$30,000 he did not restrict the builders. The result has been that the instrument completed will have cost twice that sum, about \$60,000, including expense of making certain alterations in the building or the plans of it.

The organ is the fourth largest in the world, and the third largest organ in the United States.

### Municipal Moving Pictures.

Haven, Kan.—Kansas has one of the few municipal moving picture shows in the country. It is at Haven, a little town in Reno County. If there is another municipally owned moving picture show house in the country the directors of the different film companies have no knowledge of it. An officer of one of the largest American film companies said that Kansas had the only house of the kind in the country. Haven was so small that there were no moving picture shows and only occasionally would one be given there by a traveling company. Everyone in the little town enjoyed the pictures. No one was willing to risk his money in building a moving picture house, so all the business men of the town "chipped" in enough to buy the machine and the show was started a month ago. It is a great success. The pictures are shown in the town hall every night. An admission fee is charged to pay the operator and the license on the films, which are changed twice a week. When the receipts are larger than the expenses free shows are given until the fund is exhausted or additional and special films are purchased and the show is increased and kept going with more pictures until the fund is used up. The town is now building an airdome theater. This summer the picture shows will be given in the open air and next winter they will be returned to the town hall.

### City Plans Stores.

Philadelphia, Pa.—Director Cooke of the municipal department of supplies is collecting data with the idea of opening co-operative stores for the benefit of the city employees. If the plan can be worked out successfully there will be a chain of grocery stores, meat markets, and vegetable stands taking in every section of the city.



## LEGAL NEWS

### A Summary and Notes of Recent Decisions— Rulings of Interest to Municipalities

#### Ordinances—Repeal—Saving Ordinance.

City of Birmingham vs. Baranco.—An ordinance, declaring that no penalty incurred before the repeal of an ordinance shall be affected thereby, is valid, and saves a prosecution for violation of an ordinance, pending in the circuit court at a time the ordinance is repealed by an ordinance containing no saving clause.—Court of Appeals of Alabama, 58 S. R., 944.

#### Proceedings to Incorporate—Maps

State ex rel. Allen et al. vs. Town of Phil Campbell et al.—Code 1907, which requires that a petition to incorporate as a municipal corporation shall have attached thereto an accurate plat of the territory proposed to be embraced in the corporate limits, read with section 1054, which declares that, upon compliance with the provision of the next preceding section, the judge of probate must direct an election to be held, is mandatory, and where the record shows the attachment of an inaccurate plat, void on its face, the probate judge is without jurisdiction to make an order of incorporation.—Supreme Court of Alabama, 58 S. R., 905.

#### Personal Injuries—Instructions

Snowden vs. City of St. Joseph.—An instruction having rightly defined the duty of the city to be the use of ordinary care to keep its sidewalk "reasonably safe," and other instructions having properly instructed in that respect, its inaccuracy in requiring, as a condition to recovery, that the jury find only that the sidewalk was "unsafe," instead of "not reasonably safe," was not misleading.—Kansas City Court of Appeals, 147 N. W. R., 492.

#### Bonds—Issuance

City of Newport vs. Newport National Bank.—After an ordinance, directing the issuance of bonds authorized by a vote of the people of the city of Newport, has been duly passed, approved, and published, the commissioners of that city should advertise for bids; and they must then, by proper resolution or ordinance, accept the bid.—Court of Appeals of Kentucky, 146 S. W. R., 378.

#### Implied Acceptance of Street

Ballew vs. City of St. Joseph.—Where a roadway in a city had been used by the public for more than 15 years with the knowledge and acquiescence of the city, there was an implied acceptance which imposed upon the city a duty to keep the roadway in a reasonably safe condition for pedestrians.—Kansas City Court of Appeals, Missouri, 146 S. W. R., 454.

#### Injuries to Pedestrian—Obstructions in Street

Hall vs. City of St. Joseph.—Where a pedestrian is injured by coming in contact with the tongue of a wagon left in the street in front of a blacksmith shop, the fact that the person injured is not entitled to recover against the owner of the shop does not necessarily preclude him from recovering against the city, on the theory that the property owner is primarily liable.—Kansas City Court of Appeals, Missouri, 146 S. W. R., 458.

#### Public Improvements—Damages—Appeal

Epstein vs. City of Caney.—Under General Statutes of 1909, providing that appeals may be taken from the decision of householders appointed by a city to appraise damages occasioned by the opening of an alley in the same manner and within the same time as from judgments of a justice of the peace, the householders may take, approve, and certify an appeal bond tendered within due time after the filing of their report. The validity of such a bond is not affected because immediately upon

the filing of their report, which was accepted by the city council, the householders were "discharged" or because the bond was not approved by or filed with the city clerk, or because the householders did not observe the formality of assembling together as an organizing body to approve the bond.—Supreme Court of Kansas, 124 P. R., 421.

#### Purchase of Supplies Without Contract—Liability

City Water Co. of Chillicothe vs. City of Chillicothe, Mo.—Rev. St. Mo. 1909, § 2778, provides that no city shall make a contract unless the same shall be within the scope of its powers or be expressly authorized by law, nor unless such contract be made on a consideration wholly to be performed or executed subsequent to the making of the contract, and the contract including the consideration shall be in writing and dated when made subscribed by the parties thereto, or their agents authorized by law and duly appointed and authorized in writing. Held that, under such section as construed by the Missouri Supreme Court, a city, in the absence of a written contract, could not be made liable for the reasonable value of water furnished to and used by it.—United States District Court, 196 F. R., 234.

#### Sidewalk Assessment—Conveyance of Abutting Street

Wood vs. City of Hurley.—Pending proceedings for the laying of a sidewalk along plaintiff's property by a city, he conveyed a strip of his land adjoining the street to a servant in order to save the balance of his property from the lien of the assessment. The sidewalk having been constructed, an assessment therefor was levied on the strip so conveyed, and the same amount also was levied on plaintiff's remaining property. Held, that since the conveyance of the strip was void as against the city's lien, and the assessment against the strip conveyed was unauthorized and void, there was but one legal assessment which was therefore not void on the ground of double assessment.—Supreme Court of South Dakota, 136 N. W. R., 107.

#### Bonds—Power of Council

Hickey et al. vs. City of Nampa.—Under the provisions of Revised Codes, a city council has the right and authority to authorize and issue municipal coupon bonds for the funding or refunding of outstanding warrants and indebtedness, without submitting the question to a vote of the people, where the funding or refunding of such outstanding indebtedness will be to the profit and benefit of the city. Supreme Court of Idaho.—124 P. R., 780.

#### Contracts for Machinery—Four Branches—Authority

Indiana Road Mach. Co. vs. Town of Lake.—St. 1898, as added by Laws 1899, provides that in any town in which the highway tax is paid in whole or in part by labor the chairman of the town board, on petition of a majority of the taxpayers of one or more superintendent districts, etc., may purchase, on credit or otherwise, a road machine or wheel scraper for such district, to be paid for out of the highway tax for the district or districts for which the same is purchased. Laws 1899 authorizes town boards to purchase machines, implements, stone, gravel, or other material on such terms as may be proper, and St. 1898, as amended by Laws 1907, declares that no town orders shall be issued until the tax for the payment thereof shall have been voted by the electors, nor shall any town board authorize the issuance of any order for more than the amount which the town is authorized to appropriate for the purposes for which the order is issued. Held, that the provision authorizing town boards, to purchase machinery, etc., did not confer on the board carte blanche to buy and agree to pay for what it saw fit, but should be construed to confer such power only when the electors have made provision to meet expenditures, and have in fact or in effect authorized it, and hence an order to pay an installment on the purchase of a rock crusher by a town board for the purchase of which no taxpayers petition had been filed, or money appropriated, was unenforceable.—Supreme Court of Wisconsin, 136 N. W. R., 178.

## THE MUNICIPAL INDEX

In Which Are Listed and Classified by Subjects All Articles Treating of Municipal Topics Which Have Appeared During the Past Month in the Leading Periodicals.

It is our purpose to give in the second issue of each month a list of all articles of any length or importance which have appeared in all the American periodicals and the leading English, French and German ones, dealing more or less directly with municipal matters. The index is kept up to date, and the month of literature covered each time will be brought up to within two or three days of publication. Our chief object in this is to keep our readers in touch with all the current literature on municipal matters. In furtherance of this we will furnish any of the articles listed in the index for the price named after each article, except that where an article is continued in two or three issues of the paper, the price given is for each of said issues. In addition to the titles, where these are not sufficiently descriptive or where the article is of sufficient importance, a brief statement of its contents is added. The length also is given, and the name of the author when it is a contributed article.

## ROADS AND PAVEMENTS.

**Highways, Improvement of Country.** Advantages of vitrified brick. By W. P. Blair. Illustrated, 2 pp., Contract Record, July 10. 15 cts.

**State Highways of Idaho.** By A. E. Robinson, State Engineer. 5 pp., Journal, Idaho Society of Engineers, June. The Administration of the Highway Improvement Vote in Saskatchewan. Bulletin of the Board of Highway Commissioners. 2½ pp., Canadian Engineer, July 4. 15 cts.

**The State Roads of Massachusetts.** Paper before Boston Society of Civil Engineers. By A. W. Dean. 2 pp., Engineering Record, July 27. 10 cts.

**Importance of Good Roads.** Address before Chicago Association of Commerce. By Homer J. Tiece. Illustrated. 3½ pp., Clay-Worker, July. 25 cts.

**Permanency vs. Temporary Expediency in Highway Construction.** By P. W. Rochester. Illustrated, 5 pp., Pacific Municipalities, May. 20 cts.

**Surveys with the Plane Table, Road.** ½ p., Engineering Record, July 20. 10 cts.

**Methods of Making Road Surveys.** Adopted by the Illinois Highway Commission. Illustrated, 1½ pp., Good Roads, July 6. 10 cts.

**The Work of Road Surveys.** Communication from W. H. Baxter, 1 p., Surveyor, July 5. 40 cts.

**Specifications of a California Highway Commission.** 1-13 pp., Engineering & Contracting, July 3. 10 cts.

**English Directions for Resurfacing Macadam Roads.** 1 p., Engineering & Contracting, July 24. 10 cts.

**Specifications of the Association for Standardizing Paving Specifications.** 4½ pp., Good Roads, July 6. 10 cts.

**Cost of Macadam and Gravel Road Construction in Missouri.** 2-3 p., Engineering & Contracting, July 3. 10 cts.

**Assessing Paving Costs.** ¼ p., Municipal Journal, Aug. 1. 10 cts.

**Asphalt Macadam.** By Cecil Nathan. 1 p., Surveyor, July 19. 40 cts.

**Trinidad and Bermudez Asphalts and Their Use in Highway Construction.** By Clifford Richardson. Illustrated. 12½ pp., Popular Science Monthly, August. 30 cts.

**Concrete Pavements.** History and summary of practice. 2 pp., Engineering & Contracting, July 10. 10 cts.

**Concrete Park Roadway in Cleveland.** 1-3 p., Engineering Record, July 27. 10 cts.

**Summary of Practice in Concrete Paving.** Paper before Iowa Engineering Society. By K. H. Talbot. 3 pp., Contract Record, July 17. 15 cts.

**Concrete Road Experience in Michigan.** 1 p., Contract Record, July 10. 15 cts.

**Concrete Roads in Michigan.** Report of Minnesota State Highway Engineer. ¾ p., Municipal Journal, Aug. 1. 10 cts.

**Concrete Paving in Boise City.** ¼ p., Municipal Journal, Aug. 1. 10 cts.

**Material, Standardization of Road.** 1-3 p., Contract Journal, July 3. 20 cts.

**Congress, American Road.** ¼ p., Municipal Journal, July 11. 10 cts.

**Experimental Pavements on Hillside Ave., Queens Borough, New York City.** 1½ pp., Engineering & Contracting, July 24. 10 cts.

**Experimental Pavements in the Borough of Queens, New York City.** Illustrated, 5 pp., Good Roads, July 6. 10 cts.

**Experimental Pavements on Second Ave., New York.** ¼ p., Good Roads, July 6. 10 cts.

**Brick Paving in Louisville.** By C. D. Crain. Illustrated, 2½ pp., Brick, July 1. 10 cts.

**Asphalt Paving on Brick.** Work done in Louisville, Ky. Illustrated, ¼ p., Municipal Journal, July 18. 10 cts.

**Cost of Repairing Sheet Asphalt Pavements in Brooklyn, N. Y.** Illustrated, 2 pp., Engineering & Contracting, July 17. 10 cts.

**Brick Pavements, Strain Measurements of.** Paper before National Brick Manufacturers' Association. By James E. Howard. Illustrated, 3 pp., Brick, July 1. 10 cts.

**Wood Block Pavement.** New Specifications of the Board of Local Improvements of Chicago, for Creosote. 1½ pp., Engineering & Contracting, July 17. 10 cts.

## SEWERAGE AND SANITATION.

**Sewering Jamaica Bay Division.** Description of plans. 1 p., Municipal Journal, July 11. 10 cts.

**Sewer, Brooklyn's New Outfall.** Illustrated, 3 pp., Pacific Municipalities, May. 20 cts.

**Construction of Sewers and Catch Basins in Pittsburgh, Pa.** Illustrated, 6 pp., Engineering and Contracting, July 17. 10 cts.

**Difficult Sewer Location.** Underwashing of storm sewer. Illustrated, 1 p., Municipal Journal, July 25. 10 cts.

**Submerged Outfall Extension of the Bronx Valley Sewer.** Illustrated, 1 p., Engineering Record, July 27. 10 cts.

**Pumping Station, Chattanooga's Sewage.** Illustrated, 2 pp., Engineering Record, July 20. 10 cts.

**Utilizing Sewage Fall.** ¼ p., Municipal Journal, July 18. 10 cts.

**Pollution, Stream.** By John W. Hill. 7 pp., Bulletin Ohio State Board of Health, June.

**Water Pollution Control in Ohio.** Decision of the Supreme Court of Ohio. 3 pp., Engineering News, July 11. 15 cts.

**Sewage Disposal Plans for Jamaica Bay, N. Y.** 1 p., Engineering Record, July 27. 10 cts.

**Sewage Disposal at Mansfield, England.** ½ p., Engineering Record, July 6. 10 cts.

**Sewage Disposal Works at Bellefontaine.** Illustrated, 1-13 pp., Engineering Record, July 27. 10 cts.

**Sewage Disposal Works at a Pennsylvania Hospital.** 2 pp., Engineering Record, July 20. 10 cts.

**Sewage Disposal at East Ham.** 1-3 p., Engineering Record, July 13. 10 cts.

**Sewage Disposal at Albany.** 1 p., Engineering Record, Aug. 3. 10 cts.

**Calder Vale Sewage Disposal Works.** Paper before Association of Managers of Sewage Disposal Works. By J. P. Wakeford. 2½ p., Contract Journal, July 10. 20 cts. 1 p., Surveyor, June 28. 40 cts.

**Chicago's Illusive Sewage Disposal Methods.** 1½ pp., Canadian Engineer, July 18. 15 cts.

**Sprinkler Filter Beds with Fixed Sprays and Revolving Sprinklers.** 1½ pp., Engineering and Contracting, July 24. 10 cts.

**Fixed Sprays, Revolving and Traveling Sprinklers.** Paper before Association of Managers of Sewage Disposal Works. By Reginald Brown. 2 pp., Surveyor, June 28. 40 cts.

**Screening Sewage at Plainfield.** By Roy S. Lanphear. Illustrated, 1 p., Engineering Record, Aug. 3. 10 cts.

**Methods of Differentiating Soils for Sewage Purification.** Paper before Association of Managers of Sewage Disposal Works. By G. J. Fowler and Wm. Clifford. Illustrated, 4 pp., Surveyor, July 19. 40 cts.

**Sewage Precipitation at Providence.** ¼ p., Engineering Record, Aug. 3. 10 cts.

**Septic Tank Patent Suit.** ¼ p., Municipal Journal, July 18. 10 cts.

**Electrolytic Treatment of Sewage.** ¾ p., Engineering Record, July 13. 10 cts.

**Electrical Sewage Disposal Plant.** By C. L. Edholm. Illustrated, 2 pp., Canadian Engineer, July 18. 15 cts.

**Electrolytic Treatment of Sewage.** Paper before Engineering Association of the South. By W. Rawson Collier. 7 pp., Proceedings, Engineering Association of the South, June. \$1.00.

**Prevention of Aerial Nuisance from Sewage Containing Brewery Waste.** Deodorization methods used at Stratford-upon-Avon. Paper before Association of Managers of Sewage Disposal Works. By H. D. Bell. 2 pp., Surveyor, July 12. 40 cts. 1½ pp., Engineering Record, Aug. 3. 10 cts.

**To What Degree Must Sewage be Purified.** Paper before American Water Works Association. By Chester G. Wigley. 1 p., Contract Record, July 3. 15 cts. 1 p., Canadian Engineer, July 11. 15 cts.

**Health Officer, Work of the Village and Township.** By M. Z. Bair, Principal Asst. Engineer, State Board of Health. 4½ pp., Bulletin Ohio State Board of Health, July.

**Relation of the State Board of Health to Village and Township Boards of Health.** By Oscar Hasencamp. 2 pp., Bulletin Ohio State Board of Health, July.

**Bense Act, Supreme Court Decision on ½ p., Municipal Journal, Aug. 1. 10 cts.**

**Typhoid Fever at Corning, N. Y.** ½ p., Engineering Record, July 27. 10 cts.

**Ordinances, Rules and Regulations, Pertaining to Public Hygiene, Municipal.** 4½ pp., Public Health Reports, July 5.

**Ontario's New Health Act.** ½ p., Municipal Journal, Aug. 1. 10 cts.

**Propagation of Disease, The Role of Carrier-Cases in the.** By E. J. McWeeney, bacteriologist to Ireland Local Government Board. 11 pp., Journal of State Medicine, July. 75 cts.

**Dogs, Board of Health Destroys.** ¼ p., Municipal Journal, Aug. 1. 10 cts.

**Disinfectants, Antiseptics and Deodorants, with Examples of Each.** By H. S. Jackson. 1 p., Surveyor, July 5. 40 cts.

## WATER SUPPLY.

**Water Works, Bridlington.** Paper before Institution of Municipal and County Engineers. By Sidney Charlesworth. 2½ pp., Surveyor, July 12. 40 cts.

**Stourbridge Water Works and Recent Borings.** Paper before Municipal and County Engineers. By Wm. Fiddian. 2-3 p., Contract Journal, July 10. 20 cts. 1 p., Surveyor, July 12. 40 cts.

**Water Supply Problems of the Semi-Arid Regions.** Paper before the New England Water Works Association. By Clarence Goldsmith. 14 pp., Journal, New England Water Works Association, June. \$1.00.

**The Alkaline Waters of the London Basin.** Paper before Essex Field Club, England. By John C. Thresh, 3 pp., Water, July 15. 25 cts.

**Water Supply of Rochester, Ind.** ¼ p., Municipal Journal, Aug. 1. 10 cts.

**Surface Water Supply Systems. History of Conditions in Europe.** By Prof. W. Dunbar. 11 pp., Journal of State Medicine, July. 75 cts.

**Modern Methods of Water Supply.** Paper before Students of University of Illinois. By C. Brisman. 3 pp., Contract Record, July 24. 15 cts.

**Geology of Cheltenham, with Special Reference to the Water Supply.** Paper before Institution of Water Engineers. 1 p., Surveyor, July 19. 40 cts.

**Reservoir construction, Economy of Circular Reinforced Concrete.** Paper before New England Water Works Association. By Alexander Potter. Illustrated, 6 pp., Journal New England Water Works Association, June. \$1.00.

**Waterproofing of Engineering Structures.** Paper before Western Society of Engineers. By W. H. Finley. Illustrated, 27 pp., Journal Western Society of Engineers, June. 50 cts.

**Dam, The Arrowrock.** By Chas. H. Paul, Construction Engineer, U. S. Reclamation Service. Illustrated, 11 pp., Journal, Idaho Society of Engineers, June.



Repairing the Dam at Hatfield, Wis. Illustrated, 2 1-3 pp., Engineering Record, July 27. 10 cts.

Masonry Reservoir Dams. A simple formula for their design. Paper before Institution of Municipal and County Engineers. By F. C. Urem. Illustrated, 3 pp., Surveyor, July 19. 40 cts.

Arch Dam Design: The Constant-Angle Arch Dam. By Lars Jorgensen. Illustrated, 2 pp., Engineering News, July 25. 15 cts.

Concrete-faced Earth Dam at McAlester, Okla. Illustrated, 1 p., Engineering Record, Aug. 3. 10 cts.

Austin Dam Failure. Paper before Boston Society of Civil Engineers. By Frank P. McKibben. Illustrated, 40 pp., Journal Association of Engineering Societies, June. 30 cts.

Pumps, Turbine Driven Centrifugal. Paper before American Water Works Association. By W. O. Byer. 1/2 p., Fire and Water, July 10. 10 cts.

Electric Pump Economical. 1/4 p., Municipal Journal, Aug. 1. 10 cts.

New Wells and Centrifugal Pump at Neimes, France. 1/2 p., Engineering Record, Aug. 3. 10 cts.

New Orleans' Pumping Engines. Tests of pumps at filter plant. Illustrated, 3 pp., Fire and Water, July 17. 10 cts.

Turbine Driven Centrifugal Pumps for Water Works Service. From Paper before American Water Works Association. By W. O. Beyer. 1 2-3 pp., Engineering News, July 11. 15 cts.

Water Works Pumping Station Operation at Danville, Ill. Paper before Illinois Water Supply Association. By M. M. Symons. 1 p., Engineering and Contracting, July 3. 10 cts.

San Bernardino's New Auxiliary Pumping Plant. By Will L. Brown, Engineer to Water Commission. Illustrated 4 pp., Pacific Municipalities, May. 20 cts.

Aqueduct, Removal of Entrained Air from the Catskill. 1/2 p., Engineering Record, Aug. 3. 10 cts.

Reinforced Concrete Siphon Construction on the Los Angeles Aqueduct. By D. L. Raeburn. Illustrated, 2 pp., Engineering and Contracting, July 3. 10 cts.

Constructing Six Small Tunnels in Earth and Rock, Chicago Water Works. By M. B. Reynolds. 4 1/2 pp., Engineering and Contracting, July 3. 10 cts.

Loss of Water by Seepage and Evaporation in the Ferre Canal. Paper before Louisiana Engineering Society. By W. B. Gregory. Illustrated, 11 pp., Journal Association of Engineering Society, July. 30 cts.

Electrolysis of Street Mains. Synopsis of paper before American Water Works Association. By Albert F. Ganz. Illustrated, 1 1/2 pp., Municipal Journal, July 11; 2 1/2 pp., July 18; 1-3 p., July 25. 10 cts.

Electrolysis From Stray Electric Currents. Paper before American Water Works Association. By A. F. Ganz. 2 1/2 pp., Canadian Engineer, July 4. 15 cts.

Laying Water Mains Under Streams. Paper before American Water Works Association. By M. L. Worrell, Manager, Meridian Water Works. Illustrated, 2 1/2 pp., Municipal Journal, July 11. 10 cts.

A Water-Conduit Suspension Bridge, Feurs, France. Illustrated, 1 p., Engineering News, July 25. 15 cts.

Leaks in Water System, The Costs of. Paper before American Water Works Association. By E. S. Cole. 1/2 p., Engineering and Contracting, July 3. 10 cts.

Methods of Costs of a Water Leakage Survey at Lancaster, Pa. By F. H. Shaw. Paper before American Water Works Association. 1 p., Engineering News, July 4. 15 cts.

The Cost of Leaks—Does It Pay to Stop Them? Paper before American Water Works Association. By Edw. S. Cole. Illustrated, 1 1/2 pp., Fire and Water, July 10. 10 cts.

Waste in England, Water. 1/4 p., Municipal Journal, July 18. 10 cts.

Use, Misuse and Waste of Public Water Supplies. Paper before Institution of Municipal Engineers. By Wm. Whitehouse. 2 pp., Surveyor, June 28. 40 cts. 2 1/2 pp., Water, July 15. 25 cts.

Meters in Milwaukee. 1/2 p., Municipal Journal, July 25. 10 cts.

Consumption, Floor Area Unit as a Basis for Estimating Water. Paper before American Water Works Association. By W. W. Brush. 1 1/2 pp., Canadian Engineer, July 4. 15 cts.

Hydrants, Maintenance of Fire. Paper before American Water Works Association. By C. W. Wiles. 1/2 p., Engineering and Contracting, July 3. 10 cts.

Thawing Frozen Service Pipes and Distributing Cost Thereof, Methods of. Discussion by New England Water Works Association. 8 pp., Journal, New England Water Works Association, June.

\$1.00. 1/2 p., Engineering and Contracting, July 3. 10 cts.

Emergency at Worcester, Mass., Handling a Water. Paper before New England Water Works Association. By Frank C. Kimball. Illustrated, 28 pp., Journal, New England Water Works Association, June. \$1.00.

Ice Troubles at Buffalo. Paper before American Water Works Association. By H. L. Lyon. 1 p., Canadian Engineer, July 4. 15 cts.

Measuring Devices, Water. By W. G. Steward, Asst. Engineer, U. S. Reclamation Service. Illustrated, 23 pp., Journal Idaho Society of Engineers, June.

Hydraulic Pipes and Tunnels, Waves in Long. Illustrated, 4 pp., Canadian Engineer, July 4. 15 cts.

Purification, Recent Progress in Water. By H. C. H. Shenton. 3/4 p., Contract Journal, June 26. 20 cts.

Modern Developments in Water Purification. By E. A. Andrews. Illustrated, 5 pp., Water, July 15. 25 cts.

Report on Methods of Purifying Water. By Commission of the City of Marseilles. 5 pp., La Technique Sanitaire, June. 60 cts.

French Water Purification Tests. Filtration, sterilization with hypochlorite, ozone and ultraviolet rays tested by French Commission. Illustrated, 3 1/4 pp., Municipal Journal, July 18; 1 1/4 pp., July 25; 2 pp., Aug. 1. 10 cts.

Value of a Continuous Settling Basin. Paper before American Water Works Association. By Alexander Potter. Illustrated, 4 1/2 pp., Canadian Engineer, July 11. 15 cts.

Use of Copper Sulphate in Purifying Water Supplies. Paper before Institution of Water Engineers. By Geo. Embrey. 3/4 p., Surveyor, July 5. 40 cts.

Treatment of Public Water Supplies with Hypochlorite. By W. H. Dittoe, engineer Ohio State Board of Health. 4 pp., Bulletin of the State Board, June.

Toronto Water Chlorination Plant. Illustrated, 1 1/2 pp., Canadian Engineer, July 11. 15 cts.

Sterilization of Individual Water Supplies. Method devised by the chemist of the Quebec Board of Health. 1-3 p., Contract Record, July 3. 15 cts.

Ozone: Its Properties and Commercial Production. Paper before American Institute of Electrical Engineers. By M. W. Franklin. 3 pp., Canadian Engineer, July 25. 15 cts.

Commercial Production of Ozone. 1 p., Engineering Record, July 20. 10 cts.

Violet-Ray Sterilization of Drinking Water in Chicago. Illustrated, 2-3 p., Engineering Record, July 27. 10 cts.

Self-Pollution of Water by Natural Growth. Paper before Institution of Water Engineers. By J. H. Garrett. 1 p., Surveyor, July 5. 40 cts.

Papers before the American Water Works Association. Abstracts of. 2 pp., Engineering and Contracting, July 10. 10 cts.

## STREET LIGHTING AND POWER PLANTS.

Street Lighting, Ornamental Tungsten. By S. G. Hibben and Alan Bright. Illustrated, 12 pp., Good Lighting, June. 20 cts.

Electric Illumination of New York City on Independence Day. Illustrated, 1 p., Electrical Review, July 13. 10 cts.

Appraisal of Street Lighting Service. Decision by the Massachusetts Gas and Electric Light Commission in the Worcester Street Lighting case. 3 pp., Engineering Record, July 27. 10 cts.

Gas Lighting in the South. Paper before Southern Gas Association. By H. P. Daines. 2 pp., Progressive Age, Aug. 1. 20 cts.

The Gas White Way in Manchester, N. H. Illustrated, 1 1/2 pp., Good Lighting, June. 20 cts.

Stourbridge Gas Works. Paper before Municipal and County Engineers. By C. H. Webb. 1/2 p., Contract Journal, July 10. 20 cts. 3/4 p., Surveyor, July 12. 40 cts.

Pressures, Order Regulating Gas. New York State Public Service Commission. 3/4 p., Progressive Age, Aug. 1. 20 cts.

High Pressure Gas Distribution System. Paper before Illinois Gas Association. By J. B. Hirst. 1 1/2 pp., American Gas Light Journal, July 8. 10 cts.

Gas Meters and Meter Repairs. Paper before Southern Gas Association. By Chas. Leech. 1 1/2 pp., Progressive Age, Aug. 1. 20 cts. 2 1/2 pp., American Gas Light Journal, July 13. 10 cts.

Electric System, Winnipeg Municipal. By W. G. Chace. Illustrated, 8 pp., Engineering News, July 4. 15 cts.

High Tension Transmission System of the Hydro-Electric Power Commission

of Ontario. 5 1/2 pp., Canadian Engineer, July 25. 15 cts.

Characteristics of Copper and Aluminum Overhead Line Conductors. By E. V. Pennell. Illustrated, 4 1/2 pp., Canadian Engineer, July 18. 15 cts.

Construction of Distribution System for Outlying Systems and Smaller Plants. Paper before Canadian Electrical Association. By S. B. Hood. Illustrated, 4 pp., Canadian Engineer, July 11; Illustrated, 5 pp., July 18. 15 cts.

Power Plants. Costs of Steam. From paper before Engineers Society of Western Pennsylvania. By R. W. Stovel and O. S. Lyford, Jr. 1 p., Canadian Engineer, July 11. 15 cts.

Constructing a Pumping and Lighting Station at Kilbourn, Wis. Illustrated, 3 pp., Engineering & Contracting, July 24. 10 cts.

## FIRE AND POLICE.

Fire Prevention Facilities at Hannibal, Mo. 7 pp., Report of the National Board of Fire Underwriters, July.

Fire Prevention Facilities at Akron, O. 24 pp., Report of the National Board of Fire Underwriters, July.

Fire Prevention Facilities at Evansville, Ill. 10 pp., Report of the National Board of Fire Underwriters, July.

Fire Prevention Facilities at Chicago Heights, Ill. 9 pp., Report of the National Board of Fire Underwriters, July.

Fire Waste and Fire Prevention. By Frank H. Wentworth, Secy. National Fire Protective Association. 2 pp., American Industries, July. 10 cts.

Fire Department Organization in Paris. 3 pp., Insurance Engineering, July. 25 cts.

High Pressure Fire Service, Baltimore. Description of distribution system and pumping station. Illustrated, 3 1/2 pp., Municipal Journal, July 25. 10 cts.

Baltimore High Pressure Fire Service. 11-13 pp., Engineering Record, July 13. 10 cts.

Apparatus, Progression of Motor Fire. Paper before Michigan State Firemen's Association. By Hugo R. Delfs. 1/2 p., Fire and Water, July 10. 10 cts.

Hydrants, Spacing of Fire. 1/2 p., Municipal Journal, July 11. 10 cts. 1/2 p., July 18.

The Fire Escape Problem. By Clifford A. Pendar. Illustrated, 6 pp., Architectural Record, August. 25 cts.

Police Pensions. Paper before Chief Constables' Association of Canada. By Chief Langley. 1 p., Canadian Municipal Journal, July. 15 cts.

Motor Cycle Helps the Police Force, How the. By H. C. Allen. Illustrated, 3/4 p., Leslie's Weekly, Aug. 1. 10 cts.

## GOVERNMENT AND FINANCE.

Government, Chart of Iola Municipal. Illustrated, 1-3 p., Municipal Journal, July 11. 10 cts.

Municipal Ownership. Competition, Regulation or. By C. H. McNary. 4 1/2 pp., Pacific Municipalities, May. 20 cts.

Why Municipal Plants are Failures. By V. H. Francis, Supt. Municipal Water and Light Plant, Kingfisher, Okla. 3 1/2 pp., Pacific Service, July. 20 cts.

Commission, Workings of the Oklahoma Corporation. By J. B. Love, Chairman of the Commission. 2 1/2 pp., Public Service, July. 20 cts.

Gas, Electric and Water Service Rules of the Commission of the State of Washington. 1 1/4 pp., Public Service Regulation, July. 25 cts.

Gas Service Regulation in New York. The powers, organization, equipment and methods of the gas department of the New York Public Service Commission. By C. F. Leonard, chief inspector of gas. Illustrated, 3 pp., Public Service Regulation, July. 25 cts.

Franchises, Chicago and Cleveland Street Railway. Paper before National Municipal League. By G. F. Wilcox. Illustrated, 3 1/2 pp., Engineering & Contracting, July 24. 10 cts.

Building Department, Chicago. 1 p., Engineering Record, July 6. 10 cts.

Balance Sheet, Sinking Fund. By U. L. Leonhauser, Secy., Metz Fund. 7 pp., Government Accountant, June. 15 cts.

Form of Municipal Balance Sheets. Address before Convention of Comptrollers and Accounting Officers. By Frederick A. Cleveland. 13 pp., Government Accountant, June. 15 cts.

Paying the Bills for City Improvements. Paper before Fourth National Conference on City Planning. By James A. Gallivan, Street Commissioner of Boston. 3 pp., Good Roads, July 6. 10 cts.

Excess Condemnation. From paper

by Street Commissioner James A. Gallivan before Fourth National Conference on City Planning, 1 p., Municipal Journal, Aug. 1. 10 cts.

How City Planning Bills Are to Be Paid. Paper before Fourth National Conference on City Planning. By Nelson P. Lewis, Chief Engineer Board of Estimate and Apportionment, New York City. 3½ pp., Good Roads, July 6. 10 cts.

Assessing Cost of Improvements. From paper before Fourth National Conference on City Planning. By Nelson P. Lewis. 1½ pp., Municipal Journal, Aug. 1. 10 cts.

## STRUCTURES AND MATERIALS.

**Cement.** Need of a More Severe Soundness Test for. By H. S. Spackman. 2 pp., Engineering News, July 11. 15 cts.

**Concrete** Beams and Slabs, Low Cost Testing Machines for. By Ernest McCullough. Illustrated, 1-3 pp., Engineering News, July 25. 15 cts.

Steam Tests on Concrete and Mortar. From report of U. S. Geological Survey. 3 pp., Cement and Engineering News, July. 10 cts.

**Painting** Concrete Surfaces. ¼ p., Municipal Journal, July 18. 10 cts.

New Method for Testing Paint Films and Preserving Coatings for Iron and Steel. By W. C. Slade. Illustrated. 8½ pp., Chemical Engineer, July. 25 cts.

**Blocks.** City Regulation of Cement Building. ¼ p., Municipal Journal, July 25. 10 cts.

**Asphaltum.** Development and Increase in the Use of. For water-proofing, pavements, etc. Paper before Technical Society of the Pacific Coast. By Harry Larkin. 6 pp., Journal Association of Engineering Society, July. 30 cts.

**Reinforced** Concrete, Electrolysis of. By H. P. Brown. Illustrated, 4½ pp., Engineering News, July 25. 15 cts.

**Wall.** New Cellular Concrete, along the Speedway, New York. Illustrated, 1 p., Engineering Record, July 6. 10 cts.

**Concrete Bridges.** Design of Reinforced. 1 p., Contract Record, July 24. 15 cts.

Notes on the Design of Reinforced Concrete Bridges. 2-3 p., Engineering Record, July 13. 10 cts.

The Concrete Arch as a Highway Bridge. Abstract of paper before Western Society of Civil Engineers. By Daniel B. Luten. Illustrated, 4½ pp., Good Roads, July 6. 10 cts.

Reinforced Concrete Arch over Current River, Port Arthur. By L. M. Jones. Illustrated, 5 pp., Canadian Engineer, July 4. 15 cts.

Reinforced Concrete Highway Bridge at Columbus, Ga. Illustrated, 2 pp., Engineering Record, July 6. 10 cts.

**Bridge.** A Heavy Short-Span Overhead City. Illustrated, 1-3 pp., Engineering Record, July 20. 10 cts.

Small Vertical-Lift Draw-bridges. 3 pp., Engineering News, July 18. 15 cts.

Design for the Manhattan Bridge Approach. Communication from Commissioner J. O'Keefe. Illustrated, 1 p., Engineering Record, July 13. 10 cts.

**Viaducts.** of Steel or Concrete. Illustrated, 2½ pp., Contract Record, July 24. 15 cts.

River Span of the Central Avenue Viaduct at Cleveland. Illustrated, ¾ p., Engineering Record, July 6. 10 cts.

**Skyscraper** Disaster That Will Stagger Humanity. By Edward Marshall. Illustrated, 1¾ pp., Fire and Water, July 3. 10 cts.

## MISCELLANEOUS.

**Street Cleaning** at Portland, Ore., Cost of. ½ p., Engineering & Contracting, July 3. 10 cts.

City Street Sweepings as a Fertilizer. 1 p., Engineering Record, July 13. 10 cts.

**Refuse Disposal** at Seattle, City. By G. H. Moore. Illustrated, 4 pp., Engineering News, July 4. 15 cts.

Power From Milwaukee's Garbage Incinerator. ¼ p., Municipal Journal, Aug. 1. 10 cts.

The Portsmouth, Va., Incinerator. ½ p., Municipal Journal, Aug. 1. 10 cts.

New Garbage Incineration Plant at St. Petersburg. Illustrated, 1 p., Canadian Engineer, July 4. 15 cts.

**Smoke-Abatement** Work on the Railroads in St. Louis. ¾ p., Engineering Record, July 27. 10 cts.

**Street Railway** Car Heaters, Tests of. 1½ pp., Canadian Engineer, July 4. 15 cts.

Relation of Increase of Street Railway Traffic to Increase of Population. 8 pp., Engineering & Contracting, July 10. 10 cts.

Breaking Up an Old Cable Conduit at San Francisco. By C. M. Kurtz. Illustrated, 1 p., Engineering News, July 25. 15 cts.

Development of Mechanical Traction. ¾ p., Contract Journal, July 3. 20 cts.

**Subway** Tunnel in Boston, Beacon Hill. By W. W. Davis. Illustrated, 4½ pp., Engineering Record, July 13. 10 cts.

Lexington Avenue Subway, New York. Description of covered trench construction. 2 pp., Engineering Record, Aug. 3. 10 cts.

**Waterways.** Comparison of Bridges, Ferry Bridges and Tunnels as Crossings of Navigable. Illustrated, 1 p., Engineering & Contracting, July 24. 10 cts.

**Underground** Structures, Records of. ¼ p., Municipal Journal, July 18. 10 cts.

Underground Installations for Steam and Hot Water Pipes. 3 pp., Electrical Review, July 20. 10 cts.

**Municipal Works** at Stourbridge, Some. Paper before Municipal and County Engineers. By F. Woodward. 1½ pp., Contract Journal, July 10. 20 cts. 5 pp., Surveyor, July 12. 40 cts.

New Boston Fish Pier. By F. W. Hodgdon. ½ p., Engineering Record, July 6. 10 cts.

Lowestoft Sea Defences. Paper before Municipal and County Engineers. By G. H. Hamby. Illustrated, 2 pp., Surveyor, June 28. 40 cts.

Grading the Hump at Pittsburgh. Details of work and methods. By Wm. E. Patterson. Illustrated, 4½ pp., Municipal Journal, Aug. 1. 10 cts.

Pittsburgh Hump Regrade. Illustrated, ¾ p., Engineering News, July 4. 15 cts.

The Pittsburgh Hump Cut. Illustrated, 1 p., Good Roads, July 6. 10 cts.

Municipal Progress at Calgary, Alberta. 1 p., Engineering News, July 11. 15 cts.

Twenty-five Years' Municipal Work at Lowestoft. By G. H. Hamby. 2½ pp., Contract Journal, June 26. 20 cts.

Illustrated, 5½ pp., Surveyor, June 28. 40 cts.

Bridlington and Some of Its Municipal Works and Undertakings. Paper before Institute of Municipal and County Engineers. By E. R. Matthews. Illustrated, 4 pp., Contract Journal, July 3; 2 pp., July 10. 20 cts. Illustrated, 12 pp., Surveyor, July 5. 40 cts.

Keswick and Its Municipal Undertakings. Paper before Institution of Municipal Engineers. By P. M. Hope. 1½ pp., Surveyor, July 19. 40 cts.

Double Tunnel Street in Los Angeles. Illustrated, ½ p., Municipal Journal, Aug. 1. 10 cts.

Some Notes on Birmingham. 1 p., Surveyor, July 19. 40 cts.

**Capital City.** Design for Australia's New. Successful plan by American architect. Illustrated, 3½ pp., Contract Record, July 17. 15 cts.

Design for New Capital City of Australia. Illustrated, 4 pp., Engineering News, July 4. 15 cts.

**City Planning** Commission, A. ½ p., Municipal Journal, Aug. 1. 10 cts.

**Housing** in Ireland. By A. Scott Quekett. 9 pp., Journal of State Medicine, July. 75 cts.

Youngstown Housing Experiment. By J. M. Hanson, general secretary, Youngstown Charity Organization Society. Illustrated, 3½ pp., Survey, July 6. 25 cts.

**Population** by Metropolitan Districts. Figures from the last census. ½ p., Municipal Journal, July 11. 10 cts.

**Surveys.** Short Base Triangulation Methods on Reconnaissance and Exploratory. By D. L. Raeburn. Illustrated, 1 p., Engineering News, July 25. 15 cts.

Precise Leveling in Canada. Paper before Ottawa Branch of the Royal Astronomical Society. By F. R. Reid. 4 pp., Canadian Engineer, July 11; 4 pp., July 18. 15 cts.

**Engineers.** Duties of Municipal. Presidential Address of R. J. Thomas before Institution of Municipal and County Engineers. 2 pp., Surveyor, July 12. 40 cts.

Simplifying Some Engineering Calculations. By Carl Hering. 2½ pp., Engineering News, July 11. 15 cts.

Shopwork for Engineering Students. By W. H. Herschel. 3½ pp., Engineering News, July 18. 15 cts.

Culture in the Education of Engineers. Address before Colorado School of Mines. By W. L. Saunders. 1½ pp., Canadian Engineer, July 11. 15 cts.

The Engineer in the Public Service. From address before graduating class of Case school. By F. H. Newell. 2 pp., Engineering News, July 25. 15 cts.

**Contracts** in Their Legal Aspect. Contracts induced by fraud and misrepresentation. 1 p., Contract Journal, July 10. 20 cts.

Fair and Sensible Contracts. Recommendation of American Society of Engineering Contractors. ¼ p., Municipal Journal, July 25. 10 cts.

General Conditions of Contract. Paper before Institution of Water Engineers. By H. W. Woodall. 1½ pp., Surveyor, June 28. 40 cts.

**Pumps** for Contractors. Discussion of the various kinds available. By Daniel J. Hauer. 1½ pp., Contractor, July 15. 20 cts.

**Construction** Methods Employed in Building a Galveston Causeway. Illustrated, 3 pp., Engineering Record, July 13. 10 cts.

**Hauling** Broken Stone, Motor Trucks and Trailers for. ½ p., Engineering Record, Aug. 3. 10 cts.

Moving Earth by Dump Wagons Loaded Through a Trap by Fresno Scrapers. By W. A. Gillette. Illustrated, 1 p., Engineering & Contracting, July 17. 10 cts.

**Timbering** Construction Shafts. Illustrated, 1 p., Engineering & Contracting, July 17. 10 cts.

Large Timber Bulkhead under 168-ft. Head. By A. W. Tidd. Illustrated, 1½ pp., Engineering News, July 25. 15 cts.

**Concrete.** Gravity Conveying of. ¼ p., Municipal Journal, Aug. 1. 10 cts.

**Compressed Air** Tunnel Driven without a Shield through Wet Earth at Eastview. Illustrated, 3 pp., Engineering Record, July 20. 10 cts.

**Boreholes.** Methods of Taking a Number of Cores from One Diamond Drill Hole and of Surveying the. Illustrated, 2½ pp., Engineering & Contracting, July 3. 10 cts.

Deepening and Sealing a 20-inch Well. ½ p., Engineering Record, July 13. 10 cts.

**Cost** of Feeding Workmen and Horses in a California Construction Camp. By W. A. Gillette. ½ p., Engineering & Contracting, July 3. 10 cts.

Keeping Cost of Earth Works so as to Show the Daily Unit Cost for Each Gang. By W. A. Gillette. 1 p., Engineering & Contracting, July 24. 10 cts.

**Timekeeping** System, Uniform, which Tends to Eliminate Pay-Day Disputes. By R. O. McDill. Illustrated, 1 p., Engineering & Contracting, July 17. 10 cts.

**Contractors.** City Without Local Municipal. ½ p., Engineering News, July 4. 15 cts.

**Public Utility.** Making Friends for a. By Geo. Dielman. 1½ pp., Public Service, July. 20 cts.

Valuation by Earnings. Decision of Public Service Commission of New York, Second District, of the Theory of Net Earnings. 6 pp., Public Service Regulation, July. 25 cts.

Proper Attitude of the Employee of the Gas Company Toward the Public. Paper before Gas Study Club of the Wilmington Gas Company. By D. C. Plank. 1 p., Progressive Age, Aug. 1. 20 cts.

**Civil Pensions** in New York State and City. Report of special committee of New York Civil Service Reform Association. 3½ pp., Government Accountant, June. 15 cts.

**Arbitration.** Notes on. 2½ pp., Engineering Record, July 20. 10 cts.

**Rates** for Gas Service, Determining. Elements that enter into cost of production. By Prof. C. L. Cory. 3½ pp., Public Service, July. 20 cts.

**Draw-bridge** Swinging, Comparison of Gas and Electric Power for. ¾ p., Engineering News, July 18. 15 cts.

**Building Regulation.** Recommendations of City Civil Service Commission for Improved. 1½ pp., Engineering & Contracting, July 3. 10 cts.

**Flood** of 1912, The Great Mississippi River. Report of T. G. Dabney. 2 pp., Engineering Record, July 6. 10 cts.

**Tornado** at Regina, Saskatchewan. Illustrated, 1½ pp., Engineering News, July 18. 15 cts.

**Convention** of the American Institute of Electrical Engineers, Report of the 29th Annual. 2½ pp., Engineering News, July 4. 15 cts.

Report of the 44th Annual Convention of the American Society of Civil Engineers. 2 pp., Engineering News, July 4. 15 cts.

Report of the 18th Annual Meeting of the National Municipal League. Illustrated, 2½ pp., Engineering News, July 25. 15 cts.

American Society of Civil Engineers. Presidential address of J. A. Ockerson. 1½ pp., Engineering Record, July 20. 10 cts.

**Expositions.** Popularity of Municipal. ¼ p., Municipal Journal, Aug. 1. 10 cts.



## NEWS OF THE SOCIETIES

### American Road Builders' Association.

The invitation extended by the Mayor and the Commercial Association of the city of Cincinnati to the American Road Builders' Association to hold its Ninth Annual Convention in that city has been accepted. The convention and the American Good Roads Congress which is held in connection with the convention, will, therefore, be held in Music Hall, Cincinnati, December 3, 4, 5 and 6.

In connection with the annual convention of the association, there will be held, as usual, an exhibition of machinery, materials and methods of road construction in Music Hall in space which has been set aside for the purpose. The building has a floor space of over 50,000 square feet and it is expected that all this space will be required for the exhibits. Not only will the manufacturers of material and machinery be represented in this exhibition, but the several states will have booths set aside for them in which they will exhibit models of roads, photographs, drawings, road materials, etc.. This feature will be especially attractive to road builders.

The American Road Builders' Association was organized in 1902. It is, therefore, the oldest organization of its kind. Its conventions bring together the experts of the country engaged in the work of laying out and supervising road and street construction and maintenance. The president of the association is Nelson P. Lewis, Chief Engineer Board of Estimate and Apportionment of New York City; First Vice-president Harold Parker, ex-Chairman of the Massachusetts State Highway Commission; Treasurer, Major W. W. Crosby, Consulting Engineer of the Maryland State Highway Commission; Secretary, E. L. Powers, Editor and Publisher of "Good Roads." Among the directors of the association are: W. A. McLean, Provincial Engineer of Highways of Ontario; Arthur W. Dean, Chief Engineer, Massachusetts Highway Commission; S. D. Foster, Chief Engineer, State Highway, Department of Pennsylvania; W. J. Roberts, State Highway Commissioner of Washington; James H. MacDonald, State Highway Commissioner of Connecticut; Austin B. Fletcher, State Highway Engineer of California; John R. Rablin, Chief Engineer, Metropolitan Park Commission of Boston; R. A. Meeker, State Highway Engineer of New Jersey, and Mr. H. Connell, Chief of the Bureau of Highways and Street Cleaning of Philadelphia.

### National Association of Cement Users.

President Humphrey of the National Association of Cement Users, is busily engaged in preparing the program of papers and addresses for the convention to be held in Pittsburgh, December 12-18. Efforts are being made to secure papers from not only the most famous authorities of this country but from the experts of foreign countries as well. The entire field of concrete construction will be touched upon by the subjects as outlined by President Humphrey. The proceedings of the association each year constitute the most valuable contribution to the knowledge of concrete that may

be found anywhere. The various standing committees have received letters from President Humphrey containing instructions to push their researches as rapidly as possible so as to be able to report their findings and conclusions when called upon at the convention in December. An active pre-convention campaign for more members is being conducted by Secretary Edward E. Krauss. The annual dues are only five dollars and the Secretary seems to have no difficulty in convincing those who do not belong, that membership in the association is worth several times the annual dues. The association should have the support and encouragement of everyone identified with the use of concrete in any capacity.

### Maine Society of Engineers.

The annual meeting will be held in Portland, August 14-15, according to notices and programs sent out by the secretary, Frank E. Pressey of Bangor today. The program for the two days is as follows:

August 14—Assemble at Congress Square Hotel, Portland, at 1.15 P. M. Take car at 1.30 to Cape Cottage, visit fortifications at Fort Williams, where, through special permission, an inspection of the big guns will be made. Attend the band concert and dress parade at 4 P. M. Business meeting at 6.30 P. M. at Congress Square Hotel. Consideration of applications for membership. Reports of Committees. Banquet at Congress Square Hotel at 8 P. M. Papers: Hydraulic development of Penobscot River with stereopticon illustrations, by Henry W. Foster, Cumberland Mills; Cost of Steam Power, by Seth A. Moulton, Portland.

August 15—Exhibit of engineering supplies at Congress Square Hotel; adjourned business meeting at Congress Square Hotel 8.30 A. M. Papers: The Farmingdale Station of the Central Maine Power Company, by Frank H. Mason, Waterville; Title of the Soil in the District of Maine, by J. H. Stuart, South Paris. Lunch in Portland in season to meet at Custom House wharf at 1 P. M. to take steamer to South Harpswell and return, arriving in Portland at 6.15.

### Calendar of Meetings.

August 26-27.  
INTERNATIONAL CONFERENCE ON PEOPLE'S BATHS AND SCHOOL BATHS.—Conference Scheveningen (The Hague).—A. M. Douwes Dekker, General Secretary, The Hague.

August 26-30.  
INTERNATIONAL ASSOCIATION OF MUNICIPAL ELECTRICIANS.—Seventeenth Annual Convention, Peoria, Ill.—Clarence R. George, Secretary, Houston, Tex.

August 27-29.  
UNION OF CANADIAN MUNICIPALITIES.—Annual Meeting, Windsor, Canada.—W. D. Lighthall, Secretary-Treasurer, 305 Quebec Bank Building, Montreal, Quebec, Canada.

August 28-30.  
FOURTH INTERNATIONAL SCHOOL HYGIENE CONGRESS.—Meeting, Buffalo, N. Y.—Dr. Thomas Storey, Secretary, Convent avenue and 139th street, New York, N. Y.

August 28-30.  
VIRGINIA STATE FIREMEN'S ASSOCIATION.—Twenty-sixth Annual Convention and Tournament, Roanoke, Va.—L. E. Lookabill, Vice-President, Roanoke.

September 6-13.

CONGRESS ON APPLIED CHEMISTRY.—Meeting, Washington, D. C.—Bernard C. Hesse, M.D., Secretary, 25 Broad street, New York, N. Y.

September 17-20.

INTERNATIONAL ASSOCIATION OF FIRE ENGINEERS.—Annual Convention, Denver, Col.—James McFall, Secretary, Roanoke, Va.

September 18-19.

NEW ENGLAND WATER WORKS ASSOCIATION.—Thirty-first Annual Convention, Washington, D. C.—Willard Kent, Secretary.—Headquarters, Boston, Mass.

September 18-20.

AMERICAN PUBLIC HEALTH ASSOCIATION.—Washington, D. C.—Seldcar M. Gunn, Secretary, 289 Fourth avenue, New York, N. Y.

September 23-28.

FIFTEENTH CONGRESS ON HYGIENE AND DEMOGRAPHY.—Meeting, Washington, D. C.—Dr. John S. Fulton, Secretary, Army Medical Museum, Washington, D. C.

September 24-28.

CHAMBERS OF COMMERCE AND INDUSTRIAL AND COMMERCIAL ASSOCIATIONS.—Fifth International Congress, Boston, Mass.

September 24-26.

CENTRAL STATES WATER WORKS ASSOCIATION.—Sixteenth Annual Convention, Detroit, Mich.—R. P. Bricker, Secretary, Shelby, O.

November 12-15.

AMERICAN SOCIETY OF MUNICIPAL IMPROVEMENTS.—Annual Convention, Dallas, Tex.—A. Prescott Folwell, Secretary, 50 Union Square, New York.

## PERSONALS

Ford, Frederick L., City Engineer of New Haven, Conn., R. E. Mitchell, City Engineer of Willimantic and James H. MacDonald, State Highway Commissioner, have been elected members of the executive committee of the new Connecticut Road Officials Organization. W. Scott Earns, New Haven, is president of the association.

Hedden, E. B., Reading, Pa., Assistant City Engineer, has tendered his resignation.

Hazen, Melvin C., Washington, D. C., has been reappointed Surveyor of the District of Columbia. Mr. Hazen has held the position since 1908.

Moran, Daniel E., consulting engineer, New York City, has been retained by a committee of property owners of William street, to look after their interests in connection with the construction of the rapid transit subway thought that street.

Powell, A. O., has been appointed Consulting Engineer for the Front street improvement of the harbor of New Westminster, B. C.

Rabe, Henry W. E., Galveston, Tex., has been appointed superintendent of the waterworks and sewerage department.

Shirley, Joseph W., Baltimore, Md., Chief Engineer of the Topographical Survey Commission, has been appointed a member of the Baltimore City Planning Commission, succeeding W. H. Fehsenfeld.

Troy, Peter H., Poughkeepsie, N. Y., has been appointed as a Commissioner of Education by Mayor Sague.

Wade, Newton B., has been appointed City Engineer of Millville, N. J. He was formerly assistant engineer of drainage investigation, United States Department of Agriculture.

The following mayors have been elected:

### Florida.

Miami .....Hon. J. Watson.

### Tennessee.

Bristol .....George M. Warren.

## MUNICIPAL APPLIANCES

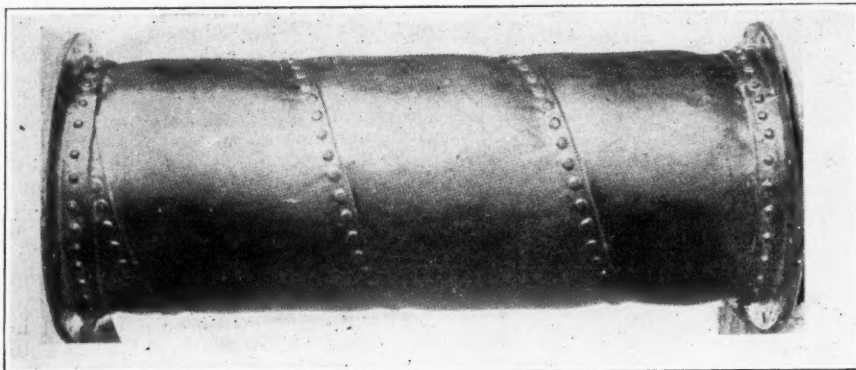
### Motz Cushion Tires.

The Motz Tire & Rubber Company, Akron, O., manufacture a cushion tire which they claim performs an equal service at less expense on gasoline cars running at any but excessive speeds, about 25 miles per hour, and are superior to solid tires for truck service in that they reduce the vibration. The distinctive features of the Motz cushion tire are the following:

1. The tread, which is double, as will be seen by reference to the illustration, tends to prevent skidding and distributes the weight over the sides.
2. Undercut sides, which allow free action of the bridges.
3. Slantwise bridges, which, when in action, have a stretching effect, which affords resiliency equal to that of a pneumatic tire.
4. The non-skid indentations are made on the inner half of each tread and are deep enough to permit considerable displacement of rubber when passing over an obstruction.

This matter of traction is important. If a truck rolled along over polished floors the solid rubber tire, having the least point of contact, would be most desirable. But this ideal condition never exists. Trucks are driven mostly on ill-paved streets, in the business

portions of cities or in outlying factory districts—not over perfect asphalt or macadam boulevards. Therefore the greater point of contact tires have with the pavement the more traction is afforded, and in equal degree is the riding quality improved.



12-INCH SPIRAL PIPE AFTER TEST OF 650 POUNDS PER SQUARE INCH.

The concentrated weight of a loaded truck causes sharp impact against the slightest obstruction in the road. If the tire does not have sufficient resiliency and bearing surface to absorb the jolt immediately, the wheel is

bounced off the road and exerts only intermittent traction. Instead of pulling against the pavement it spins in the air, wasting power.

The illustration shows in picture form the difference in bearing surface of three kinds of tires—the hard rubber, the pneumatic and the Motz cushion—all under similar load. The first shows a road contact of only  $\frac{3}{4}$  inch, the second of  $3\frac{3}{4}$  inches, the third of 7 inches. In other words, the Motz cushion tire has nearly double the bearing surface of the pneumatic, properly inflated, and over nine times as much as the ordinary solid tire.

As regards the question of durability, it may be stated that these tires are sold under a guarantee of 10,000 miles.

While Motz tires are designed for the one-piece clincher or any universal detachable rim, the demountable rim should be used. It enables the user to make wheel repairs at any time without removing the tire from the rim. It also enables tires to be interchanged to secure uniform wear and longer service. Rear tires always wear

out more quickly than front tires. If a truck is equipped with demountable rims the front and rear tires can be switched at any time.

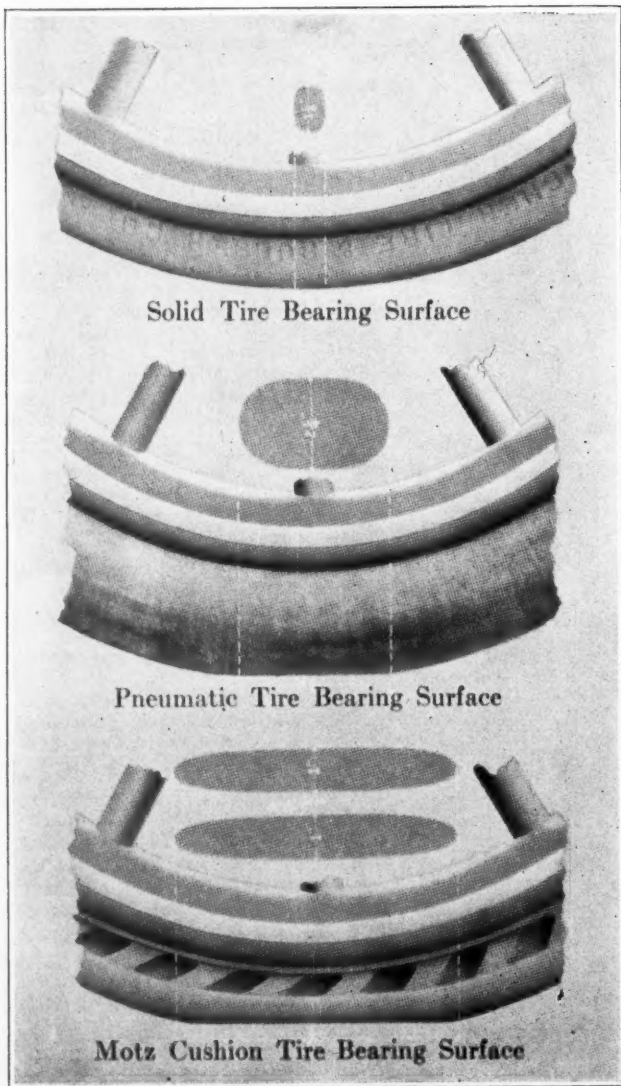
Likewise right and left tires can be interchanged—a very considerable and practical advantage, as invariably the right tire wears out before the left because the latter runs on the crown of the road. In checking up loads of power trucks it has been found that nine-tenths of them weigh more on

the right side than on the left. Drivers usually load so that the right side carries the greater burden.

### Taylor's Spiral Riveted Pipe and Forged Steel Flanges.

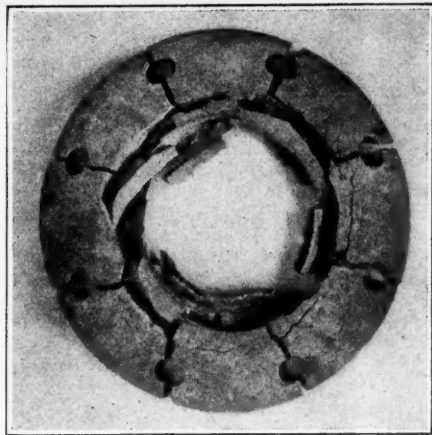
The American Spiral Pipe Works, West Fourteenth street and Forty-eighth avenue, Chicago, Ill., are the manufacturers of Taylor's spiral riveted pipe and forged steel flanges. Spiral riveted pipe has been in use for many years and engineers and users are familiar with the general features of its construction and its merits. In the process of manufacture a strip of sheet steel is wound into helical shape, with one edge overlapping the other for riveting the seam. By this company's process the sheet is drawn and joined in such manner that a metal to metal contact is obtained in the spiral seam, stretching the steel on the outer lap slightly offset in order that the pipe may be more nearly smooth on the inside. The riveting is done cold by compression or squeezing under enormous pressure and not by percussion or hammering, thus insuring complete filling of the rivet holes with slight countersink. The pipe comes from the machines in a continuous piece and is cut to any desired length. Due to this construction the seam is the strongest part of the pipe, as has been demonstrated by hydraulic tests for bursting pressure.

The illustration shows a piece of 12-inch spiral riveted pipe, No. 16 gauge, which was tested to a hydraulic pressure of 650 pounds per square inch. The portion between the seam bulged out over three-quarters of an inch, while the seam remained practically unaffected. The pressure exerted in this test is more than the theoretical pressure required to burst a seamless tube of the same diameter and thickness, made of steel with a tensile strength of 60,000 pounds per square inch. Spiral pipe is claimed to be from 30 to 50 per cent. stronger, gage for gage, than any other riveted pipe. The wide lap of the spiral seam, however, makes the pipe somewhat heavier than other pipe of the same thickness. The spiral pipe also has exceptional strength for the resistance of collap-



BEARING SURFACE OF TIRES COMPARED.

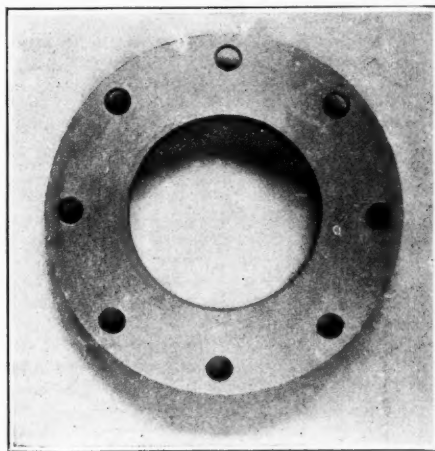




CAST IRON FLANGE AFTER TEST.

ing under vacuum or in heavy earth fills. The pipe is made in all gages up to one-quarter inch thickness and is furnished in any length desired up to 30 feet for asphalt coated pipe, and 20 feet for galvanized pipe.

Spiral riveted pipe is much used for suction lines and intake mains, running from the source of water supply to the pump. On account of the long sections that can be furnished and the



FORGED STEEL FLANGE AFTER TEST.

ease with which they can be connected a considerable saving is effected when laying the pipe across river beds or lakes.

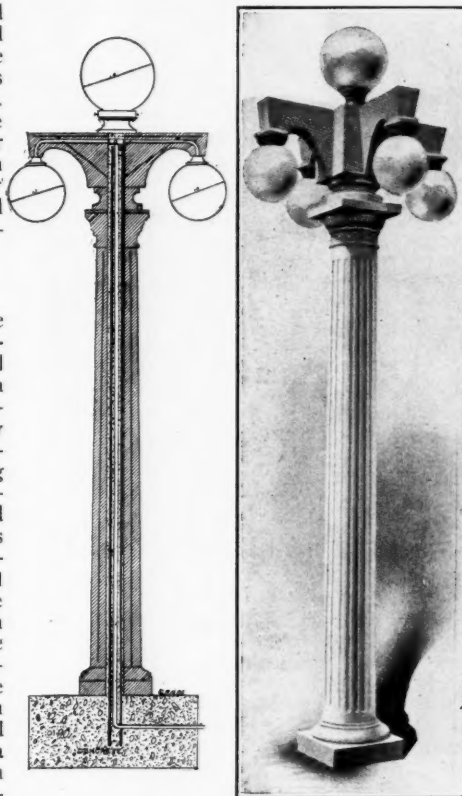
The life of the pipe is dependent to a large extent upon its protective coating of asphalt. For this reason the highest grade of asphalt possible to obtain, so far as resistance to water is concerned, is used. Hence asphaltum or mineral rubber coating made from Gilsonite is used. This material retains its elasticity in cold weather and will not crack or flake off, and, on the other hand, has such a high melting point that it will not run in the hottest summer day. In applying the coating, the pipe is submerged in a bath which is kept at a temperature of 400 degrees F. and then drained in a vertical position, giving it a thick, even coating inside and out. Forged steel flanges for riveted pipe and similar work are claimed to be an improvement over anything made heretofore. The thickness of the neck or hub of the flange is considerably less than the face of the flange. The flange is placed in position on pipe and rivet

holes are punched through flange and pipe in one operation, thus doing away with the expensive drilling of flange and pipe separate by the use of template. Punching rivet holes in this manner incurs perfect contact of pipe with flange. Forged steel flanges are designed for and used largely by the makers of riveted steel pipe and similar work. They are especially suited for high pressure hydraulic service and steam lines. Power riveters may be used for attaching these flanges, thus making additional saving in labor. They are forged from the best grade of soft steel and cannot be broken or damaged in shipment, so that when attached to the pipe in the proper manner it is safe to say that they will reach destination in the same condition.

#### Concrete Lighting Column.

The Pettyjohn Company, of Terre Haute, Ind., has placed upon the market a lighting column of reinforced granite concrete, for which they claim the great durability of reinforced concrete with the surface texture of New England granite. The column is molded in steel molds, the interior being left hollow, which permits the introducing of wires, which are inserted through an iron which also serves as additional reinforcement. After erection the space between the conduit and the column is filled with soft concrete reinforced with corrugated bars which extend through all the members of the column and into the sidewalk or foundation below grade, thus anchoring the column firmly in place. The illustration shows a Doric column of this kind without a pedestal and providing for a five-light cluster. Ionic columns with pedestals and other designs are manufactured by the same company, and these are made to provide for the use of gas as well as electric lights. The company claims that the cost of one of these is about one-tenth that of natural granite and about one-half that of cast iron; the freedom from painting or repairs still further reduces the cost, while the general finish and appearance is much superior to that of cast iron. Where it is desired to still further save in cost the company supplies similar standards of ordinary gray granite, but with fine texture and made waterproof, for about one-half the price of granite concrete; will color the columns with

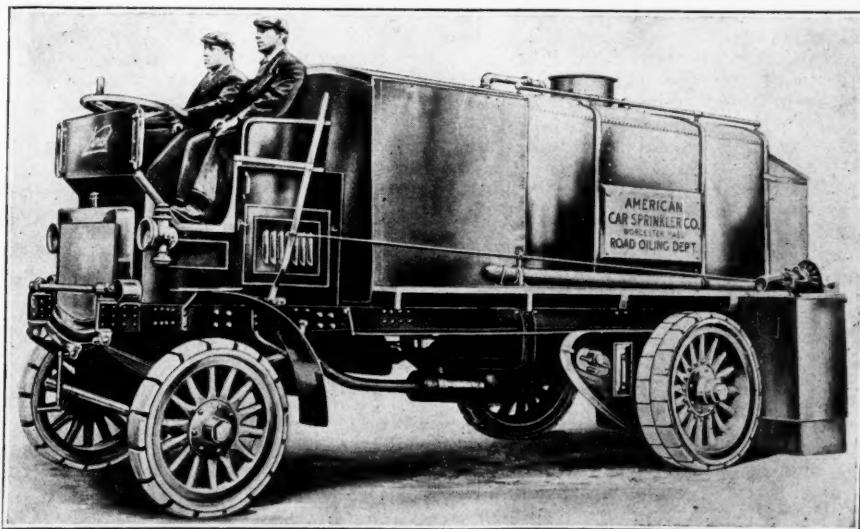
any tints desired at a slightly increased cost. The columns may be obtained alone or including the glassware, bronze holders, electric fixtures and erection ready for use. The column shown in the illustration is 10 feet 9 inches from sidewalk grade to the top of the cross arms, these latter being



CONCRETE COLUMNS.

3 feet 4 inches from end to end. The globes shown in the illustration are 10 inches in diameter for the inverted globes and 14 inches for the erect globe.

The benefits to be derived from better street lighting are such that they can hardly be overestimated, and the fact that a large percentage of the installations made up to date are due wholly or partly to private enterprise and capital, leaves no doubt that the benefits fully justify the expense.



AUTOMOBILE ROAD OILING MACHINE OF LARGE CAPACITY USED BY A CONTRACTOR IN MASSACHUSETTS.

## INDUSTRIAL NEWS

**Cast Iron Pipe.**—Chicago. Quotations: 4-inch, \$27.50; 6 to 12-inch, \$26; 16-inch and up, \$25. Birmingham movements of cast-iron pipe are reported as in excess of the make. Manufacturers are not so anxious for new business. However, additions to the order books are being made right along. All plants are busy and prices have a tendency to advance. Quotations: 4-inch, \$24; 6 to 8-inch, \$22; 10-inch and over, \$21.50. San Francisco. The tonnage continues moderate, business being very slow to develop on the various large projects under consideration. There is a good general demand for fire hydrants, gate valves, etc. New York. No lettings are in sight in this district. It is expected that New York City will soon be in the market, but there is no definite information about it. Pipe makers report an unusual demand for pipe of small diameters. On these sizes prices are very firm. Orders for the large sizes are comparatively rare. Quotations: 6-inch, car loads, \$22.50 to \$23.

**Lead.**—Lead is very quiet with the independent smelting companies making the market price. They quote 4.70c., New York, and 4.57 1-2c., St. Louis, a price which might in some instances be shaded. The American Smelting & Refining Company holds to 4.75c., New York, and 4.67 1-2c., St. Louis. In the New York market a fair quantity of resale metal can be had at 4.70c.

**Sprinkling Apparatus.**—A report from an American consul states that the municipal officers of a seaport city in his district are seriously considering the adoption of some modern method of street sprinkling. The idea is to use sea water, having a main pumping plant and a piping system for distribution, or pumps and tanks placed at convenient intervals for filling sprinkling carts. If American manufacturers of street sprinkling apparatus, horse-drawn, auto and trolley sprinklers, will send three or four sets of catalogues and price lists direct to the consulate, together with reports concerning sprinkling assessments, contract systems and the results obtained in American cities through the use of sea water for street sprinkling, or other information that would be valuable to the foreign officials and business men who are interested in making the city in question wholesome and clean, the consul will undertake the delivery of the catalogues and other particulars. He will afterwards notify the firms interested as to the probable action of the foreign city council regarding the purchase of sprinkling material. Address No. 9222 Bureau of Manufactures, Washington, D. C.

**Steam Rollers and Tractors.**—The Geiser Manufacturing Company and the Reeves Engine Company, together with the Minneapolis Gas Traction Company, the American Drill Company and other concerns manufacturing machinery, have been merged into the Emerson-Brantingham Company, which is capitalized at \$50,000,000. It employs 6,000 men and the aggregate area of its plants is 170 acres.

**Cement Shows.**—Pittsburgh and Chicago will have the big cement shows for the next season; New York and Kansas City will be omitted. Announcements to this effect have been issued by the Cement Products Exhibition Co., 72 West Adams street, Chicago. The date set for the First Pittsburgh Cement Show is December 12-18, 1912; the show will be held in Exposition Hall, Duquesne Way, Pittsburgh. The annual Chicago exposition will be held as before in the Coliseum. The date for the Chicago show has been set for January 16-23, 1913.

With the information as to the Cement Shows comes also the announcement by President Richard L. Humphrey of the National Association of Cement Users that the Ninth Annual Convention of this association will be held in Pittsburgh in December in connection with the show. The selection of Pittsburgh for a show and the abandonment of New York was based upon the desire of the management to hold a show in a new territory. Exposition Hall, Pittsburgh, has even more floor space than the big Coliseum in Chicago. The conditions for installing and removing exhibits are ideal. The building is conveniently located with reference to the principal hotels and central business district of Pittsburgh. The dates for the two shows this time have been fixed earlier in the winter. This action was taken after a careful study of the advantages offered by the various months and after consulting the opinion of a great many exhibitors.

A great many inquiries for space at the Pittsburgh and Chicago Shows have already been received by the Cement Products Exhibition Co. The space rates for the Shows next season have been put upon a very reasonable basis. That the cost of space has not been too high in the past is evidenced by the annual report of the Exhibition Co., which shows that there was only a surplus of \$900.00 remaining at the close of business last winter. While the total income and expenses exceeded \$75,000.00, the balance of only \$900.00 indicates very conservative management. The policy originally adopted by the Exhibition Co., of spending all revenue for the benefit of the Shows has been rigidly adhered to and has been adopted as the policy of all future Shows. All indications point to the continued success of the Cement Shows. A number of innovations in the Cement Show arrangement, equipment and decorations are promised. The personnel of the management remains the same. J. P. Beck is General Manager. F. E. Guy, Traffic Manager, will again assist exhibitors in their transportation problems and M. E. Gordon has again been selected as Installation Manager. The coming Shows will be advertised more widely and vigorously than ever. They will be of their usual scope, embracing all articles and appliances concerned with the use of concrete.

**Bottom Dump Wagons.**—The Eagle Wagon Works, Auburn, N. Y., F. E. Swift, manager, is receiving bids for a forge shop, 65 x 95 ft., one story brick and steel construction.

**Pumping Machinery.**—Reuben Bowen, who has been connected with the International Steam Pump Company for over fifteen years in the capacity of district and department sales manager, and also general sales manager of the Fred M. Prescott Steam Pump Company at Milwaukee, Wis., and the Jeansville Iron Works Company of Hazleton, Pa., has resigned to accept the position of general sales manager of the Epping-Carpenter Company of Pittsburgh, Pa., manufacturer of pumping machinery. The Epping-Carpenter Company is one of the oldest pump manufacturers in the United States, its organization dating back more than sixty years. The new shops of the company are the most modern in every detail, and the tool equipment of the latest improved designs for producing the high-grade direct acting and high-duty crank and fly-wheel pumping engines. With the broad experience and thorough knowledge Mr. Bowen has gained during his long and successful identification with the pump business, especially in water-works, mine and mill pumping problems, his connection with the Epping-Carpenter Company indicates a continuation of the progressive policy this concern has maintained in the past.

**New Process Gas Mantle.**—The New Process Gas Mantle Company, Philadelphia, Pa., produces a gas mantle by a process claimed to eliminate many of the costly operations usually present in mantle making. New formulas and special machinery are employed. One of the specialties is the "Twentieth Century" self-lighting mantle, brought out about a year ago. Its sales have increased so much of late that it has been given a separate department. This mantle is sold under a guarantee of 60 days of satisfactory service.

The personnel of the firm is made up of progressive young men thoroughly trained in the mantle business. The senior member is a chemist who has associated with him men of mechanical skill, and together they have worked out their "new process" of manufacture, from which the company takes its name.

**Triangle Mesh Reinforcement.**—The sales department of the American Steel and Wire Company, 30 Church street, New York City, have sent a circular letter to their customers expressing the opinion that before long there would be an increase in the price of triangle mesh reinforcement. The company is not able to state when nor how much the advance on this material will be, but quotations can no longer be made for the buyer's acceptance at his convenience.

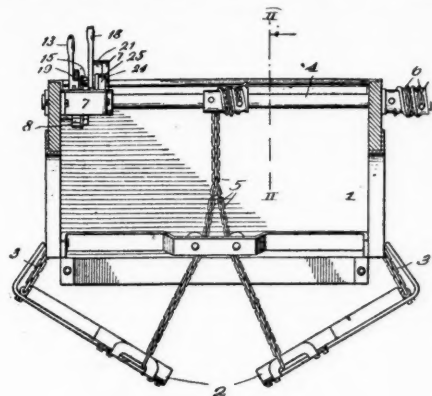
**Fire Whistle.**—Last week a very satisfactory trial was given of the Le Baron fire alarm whistle, recently installed at the Eben Sutton engine company's house, North Andover, Mass., by the Gamewell Fire Alarm Telegraph Company. Quite a number gathered about the central fire station. The whistle blasts were distinctly heard in all sections of the town. The sum of \$1,800 was appropriated at the annual March meeting for the whistle, which was installed under the direction of a committee consisting of Frank W. Frisbee, chairman of the board of selectmen; Chief Charles A. Dame of the engineers, County Commissioner James C. Poor, Contractor D. J. Costello and A. W. Badger.



## PATENT CLAIMS

1,033,226. CONTROLLING MEANS FOR DUMPING WAGONS. Albert T. Bossert, Kansas City, Mo., assignor to Smith & Sons Manufacturing Company, Kansas City, Mo. Serial No. 590,686.

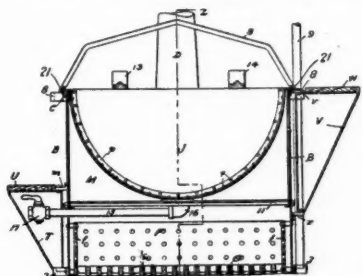
In combination with a bottom dump-wagon, an escape wheel geared to the doors of said wagon to permit them to open step by step,



an escape-lever operably engaging said escape-wheel to control the movement of the same, a pivotally-mounted latch upon which said escape lever is fulcrumed so that the same may be thrown out of engagement with the escape-wheel, and a hook for holding said latch in operative position.

1,033,131. PORTABLE APPARATUS FOR HEATING A BINDER FOR ROAD CONSTRUCTION. Matthew Van Alstyne, Albany, N. Y. Serial No. 621,748.

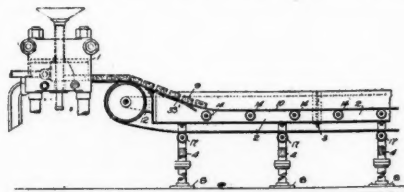
In a portable apparatus for heating tar and similar substances, a boiler iron housing; wheels upon which said housing is mounted; a smoke chamber in said housing; a smoke stack connected with said smoke chamber; a fire chamber beneath said housing; a tank made up of one piece of boiler iron curved, with a rectangular plate at each end thereof and attached thereto; a flange along the edge



of said tank; angle bars attached to the side of said housing; an asbestos strip between said flange and said angle bars; brackets on the side of said housing; a scaffold plank on said brackets; a mast; a means for securing said mast to said housing; beveled bars extending from end to end of the tank, at the top thereof, upon which the tar and other substance to be treated are placed during the process of delivery to the tank; a means for drawing out the contents of said tank, all substantially as described.

1,033,751. ASPHALT-BLOCK COOLER. George E. Whitney, Yonkers, N. Y., assignor to The International Pavement Company, Hartford, Conn., a Corporation of Connecticut. Serial No. 526,364.

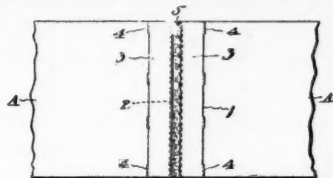
An asphalt block cooler comprising in combination an elongated trough or receptacle having one lateral edge lower than the other



to constitute a lateral discharge, a side gutter into which said trough discharges, means to admit a cooling liquid at the bottom of the trough at a plurality of points spaced longitudinally along the same, and means to traverse blocks through said trough longitudinally thereof.

1,033,431. EXPANSION JOINT FOR CONCRETE PAVEMENTS. Martin F. McCarthy, Davenport, Ia. Serial No. 647,957.

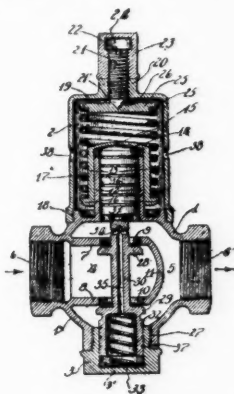
A joint member for concrete pavements comprising a strip of sheet metal bent in a U



shape in cross-section, laterally extending flanges on the upper edges of said U shaped portion, and downwardly extending anchoring lugs or projections on said flanges, substantially as shown and described.

1,033,653. BOILER-TUBE CLEANER. Alfred Regulating Valve. William Hochfeldt, Chicago, Ill., assignor to Safety Equipment Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Serial No. 611,223.

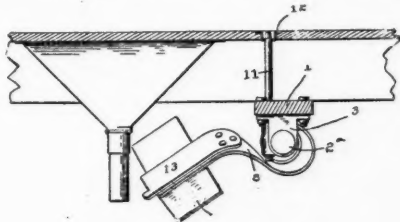
In a fluid pressure reducing and regulating valve, in combination, a main casing body having fluid-inlet and outlet ports, inlet and outlet chambers into which said ports lead respectively, a partition separating said chambers, said partition having a valve port therein, a valve co-acting with said valve port, a stem on which said valve is attached, pistons



on opposite ends of said stem, cylinders with said pistons co-act attached to opposite sides of said main casing and opening into said outlet chamber, a heavy spring pressing inward against one of said pistons tending to open said valve, protected and concealed means to adjust the pressure of said spring, a relatively weak spring pressing inward against the other of said pistons tending to close said valve, the cylinder with which the second said piston co-acts being integrally closed at its outer end, and a fluid passage leading from the said outlet chamber to the interior of the said cylinder back of the second said piston.

1,033,539. TRACK-SCRAPER FOR STREET-RAILWAY CARS. George W. Clark, Grand Rapids, Mich. Serial No. 637,544.

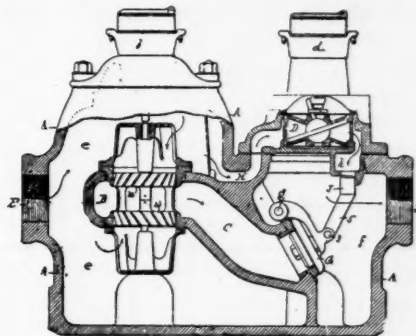
A track scraper, comprising a short horizontal shaft, having a head at one end and a cotter at the other end and also having a longitudinal groove and a circumference worm gear, two brackets spaced apart in which said



shaft is journaled one of said brackets being chambered to form a housing inclosing said worm gear, a vertical shaft journaled in the chambered bracket and having a worm engaging said gear, a spring coiled around the horizontal shaft having one end turned inward and detachably engaging the groove and a scraper attached to the other end of the spring.

1,033,680. WATER-METER. Henry I. Dilts, Elmhurst, N. Y., assignor to Neptune Meter Company, Long Island City, N. Y., a Corporation of New Jersey. Serial No. 475,964.

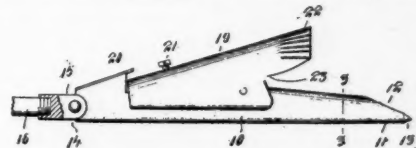
The combination of a relatively high duty meter, a relatively low duty meter, and a common conduit having branches in which the two meters are respectively located, the in-



flow and outflow being common to both, with a pivoted valve controlling the flow through the high duty meter, and a plug valve controlling the flow through the other meter and having its stem pivoted to the back of the first mentioned valve, as and for the purpose described.

1,033,653. BOILER-TUBE CLEANER. Alfred Ashton, Plymouth, Pa. Serial No. 677,202.

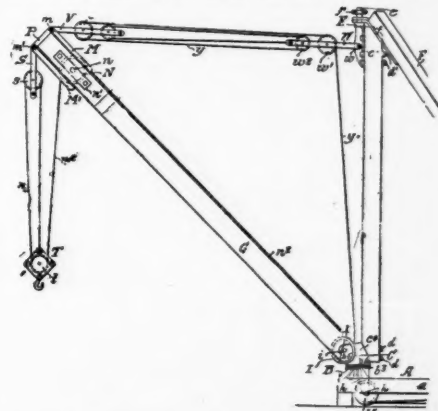
In a device of the class described, the combination with a cutter body, of a cap mounted to swing on the said cutter body, a spring secured to the cutter body and having the free end thereof engaging the under side of the cap,



adjacent the forward end thereof, a stop plate extending forwardly from the rear end of the said cap to limit the swinging movement thereof, and an adjusting screw mounted on the said cutter body and slidably engaged by the said cap for adjusting the swinging movement of the said cap relatively to the said cutter body.

1,033,652. DERRICK. Jacob S. Allen, Philadelphia, Pa., assignor to Eleanor C. Allen, Philadelphia, Pa. Serial No. 625,722.

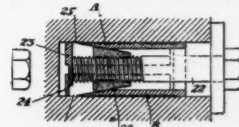
The combination in a derrick, of a foot block step having a recess therein, a foot block



having a gudgeon extending into the recess, a mast secured to the foot block, a boom pivoted to the foot block, the lower end of the gudgeon being curved to form a rocker, the curve lying in the plane of oscillation of the boom.

1,033,477. EXPANSION-BOLT. Herbert W. Mower, Newark, N. J. Serial No. 676,232.

A shield member for expansion bolts comprising a pair of sections having an integral



connecting strip extending from each section at a place intermediate of the longitudinal edges whereby both co-operating edges are free to separate upon expansion of the shield.

## THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Bridges and Concrete Work—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards.

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we cannot guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also correction of any errors discovered.

### BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>STREET IMPROVEMENTS</b>				
Virginia	Richmond	Aug. 6	Constn. 1 mile of macadam road	County Commissioners.
Delaware	Wilmington	Aug. 6, noon	Constn. 3 miles macadam road	F. A. Price, Commissioner.
Illinois	Grafton	Aug. 6	Constn. granitoid s'walk & concrete wall	H. C. Miller, City Clerk.
Nebraska	Madison	Aug. 6	Constn. roads throughout county	S. R. McFarland, Co. Clk.
Maryland	Rockville	Aug. 6	Improv. and macadamizing 2½ miles rd.	B. E. Clark, Co. Clerk.
Maryland	Annapolis	Aug. 6	Constn. 1 mile highway	County Commissioners.
New York	North Pelham	Aug. 6	Macadamizing highway	J. W. Stone, Village Clk.
New York	New York	Aug. 6	Const. cement s'walks, sheet asph., etc.	T. W. Whittle, Act. Bor. Fr.
New York	New York	Aug. 6, 2 p.m.	Paving a number of streets	Geo. McAneny, Bor. Pres.
Tennessee	Corinth	Aug. 7, 2 p.m.	Constn. 8½ miles gravel road	S. H. Allen, Co. Engineer.
New York	Rochester	Aug. 7, 11 a.m.	Const. cem. walk, bk., asp. & wd. blk. pav.	F. X. Pifer, Secretary.
Montana	Butte	Aug. 7, 5 p.m.	Paving several streets with brick	W. A. Willis, City Clerk.
Illinois	Chicago	Aug. 7	Constg. 128,000 sq. yd. asp., 15,000 sq. yd. wd.	Board of Local Improvements.
Iowa	Des Moines	Aug. 7	Paving with asphalt and bitulithic	Commissioners.
Michigan	Ann Arbor	Aug. 7	Constructing concrete pavement	R. Granger, City Clerk.
Missouri	Bolivar	Aug. 7	Paving several streets with concrete	T. S. Leavitt, City Clerk.
Montana	Butte	Aug. 7	Constructing sidewalks and paving alley	City Clerk.
Illinois	Pekin	Aug. 8	Constructing 30,000 yds. bk. pavement	J. R. Seiber, City Engineer.
Ohio	Canton	Aug. 8	Constructing 3 miles block pavement, also curbing, flagging, &c. Cost \$220,000	P. H. Weber, City Engineer.
Illinois	Morris	Aug. 8, 10 a.m.	Constn. 6,576 yds. asphaltic concrete	F. D. Condon, City Clk.
Michigan	Hastings	Aug. 9	Constg. 18,000 yds. concrete pavement	J. M. Patten, City Clerk.
Ohio	Cleveland	Aug. 9	Constructing brick pavements	W. J. Springborn, Dir. Pub. Ser.
Ohio	Akron	Aug. 9, noon	Imp. Corson ave	R. M. Fillmore, Dir. Pub. Serv.
New Jersey	Cedar Grove	Aug. 9, 8 p.m.	Constn. sidewalks	L. G. Boden, Chrmn. Committee.
Minnesota	Duluth	Aug. 9, 10 a.m.	Constn. cement curb and gutter	O. G. Olson, Pres. Bd. Pub. Wks.
Illinois	Evergreen Park	Aug. 9	Constn. macadam roads	L. H. Weber, Village Clerk.
Indiana	Terre Haute	Aug. 10	Constructing macadam roads	N. C. Wallace, County Auditor.
Texas	Houston Heights	Aug. 10	Constg. gravel or shell sts. 10 miles	D. Barker, Mayor.
Maryland	Annapolis	Aug. 10	Constructing state highway	S. O. Talghman, County Clerk.
Kentucky	Louisville	Aug. 12, 2 p.m.	Constn. sidewalks	J. D. Wakefield, Pr. B. P. W.
Texas	Taylor	Aug. 12, 8.30 p.m.	Constn. 15 blocks of pavement	D. L. Noble, City Sec.
Pennsylvania	Burgettstown	Aug. 12, 1 p.m.	Constn. 4,200 yds. pavement	J. M. Scott, Boro. Clerk.
New York	Solvay	Aug. 12, 7 p.m.	Constn. 1,100 lin. ft. road	J. J. Harper, Town Supervisor.
Minnesota	Duluth	Aug. 12, 10 a.m.	Constn. culverts & grading	Geddes, N. Y.
Ohio	Urbana	Aug. 12, noon	Constn. .62 miles macadam	O. G. Olsen, Pres. Bd. Pub. Wks.
Nebraska	Hastings	Aug. 12	Re-paving 2d street	County Commissioners.
New Jersey	Newark	Aug. 12, noon	Constn. artificial stone wall	A. T. Bratton, City Clk.
Indiana	Muncie	Aug. 12, 10 a.m.	Improving highway	J. F. Connelly, City Clk.
Ohio	Lisbon	Aug. 12, 1 p.m.	Constn. 1½ miles brick road	F. M. Williams, Co. Audr.
Rhode Island	Woonsocket	Aug. 12, 8 p.m.	Re-establishing grds on number of sts and sdwks	Co. Comrs.
Indiana	Fowler	Aug. 12	Constn. Matthew-Moran free-stone road	Wm. O. Park, City Clk.
North Dakota	Bismarck	Aug. 12, 8 p.m.	Grad. streets	L. Shipman, County Aud.
Ohio	Lisbon	Aug. 12	Constn. brick and Tarvia road	R. H. Thistlethwaite, City Aud.
Alabama	Marion	Aug. 12, 2 p.m.	Constn. 4½ miles gravel roads	County Commissioners.
Alabama	Rockford	Aug. 12, 2 p.m.	Constn. 6 miles top-soil road	County Commissioners.
Maryland	Belair	Aug. 12	Constn. 1.08 miles road	County Commissioners.
Texas	Centerville	Aug. 12	Constn. public roads	Mayor Pease.
New York	Long Island City	Aug. 12	Imp. and paving number streets	M. O. Woodward, City Sec'y.
Ohio	Ashtabula	Aug. 12	Constn. 5,600 yds. brick pavement	County Commissioners.
Ohio	Columbus	Aug. 13	Furn. 200,000 street paving blocks	P. L. Hardison, State H'way Comr.
West Virginia	Bluefield	Aug. 13	Constn. 3 miles road	County Commissioners.
West Virginia	Princeton	Aug. 13, noon	Constn. 3 miles road	Dr. of Pub. Serv.
Texas	Temple	Aug. 13, 8 p.m.	Pavg. Central ave. with brick or creosoted blks.	J. T. White, Pres.
Alabama	Livingston	Aug. 13, noon	Constn. 3½ miles chert road	R. K. Compton, Chairman.
Maryland	Rockville	Aug. 13, 2 p.m.	Macad. 6 miles road	J. Ross, Dist. Clerk.
Maryland	Baltimore	Aug. 13, 11 a.m.	Constn. 5,300 yds. granite block	L. Peyton, City Engineer.
New Jersey	Linden	Aug. 14, 8 p.m.	Constn. sidewalks	F. T. Benoy, Chrmn. B. P. W.
Illinois	Moline	Aug. 14, 11.30 a.m.	Constn. 15,000 yds. brick pavement	F. G. Stockton, Sec. D. P. Ser.
Maine	Augusta	Aug. 14, 3 p.m.	Constn. highway in town of Wells	G. H. Casey, Chairman Com.
Ohio	Cleveland	Aug. 14, 10 a.m.	Constn. 2.94 miles brick pav't.	J. C. Haines, Chairman Com.
New Jersey	Linden	Aug. 14, 8 p.m.	Constn. sidewalks	F. R. Allen, City Engineer.
Indiana	Fort Wayne	Aug. 15, 7.30 p.m.	Paving number alleys	Joseph Ross, Dist. Clerk.
Ohio	Springfield	Aug. 15, noon	Pavg. Columbia street	Board Public Works.
Indiana	Fort Wayne	Aug. 15, 7.30 p.m.	Const. city's portion of track elev'n work.	S. Marcus, Chairman Com.
Ohio	LaGrange	Aug. 15, 1 p.m.	Macadamizing road	County Commissioners.
Ohio	Elyria	Aug. 15, 1 p.m.	Grad. and macadamizing road	F. I. Ellenberger, Co. Clk.
Missouri	Fulton	Aug. 15	Const. 3,630 sq. yds. brck pvg; 1,550 ft. enrt cb.	Commissioners.
Ohio	Toledo	Aug. 16, noon	Paving with brick	P. D. Thurmond, City Engr.
Iowa	Davenport	Aug. 16	Constn. 1,700 yds. concrete pavement	County Commissioners.
New Jersey	Hackensack	Aug. 16	Constn. asphalt macadam	Board Public Works.
Kansas	Chanute	Aug. 17	Constn. stone and earth road	Board of Freeholders.
Pennsylvania	Marcus Hook	Aug. 19, 8 p.m.	Paving with asphaltum composition	Roads Commissioners.
New Jersey	Camden	Aug. 19, 8 p.m.	Paving several sts. with Belgian block	M. E. Connolly, Boro. Pres.
Ohio	Toledo	Aug. 19, 10 a.m.	Grading, draining and macad county roads	M. N. Turner, Dir. Pub. Ser.
New Jersey	Trenton	Aug. 19, 1 p.m.	Constn. 25,500 yds. bk. or wd. blk. pav'mt.	C. J. Sanzenbacher, Co. Audr.
Arkansas	Pine Bluff	Aug. 20, 2 p.m.	Imp. and repairing roads	D. F. Weeks, Supt.
Nebraska	Grand Island	Aug. 20	Constn. 1½ miles road	S. A. Kinear, Dir. Pub. Ser.
New York	No. Tarrytown	Aug. 20, 3 p.m.	Constn. 12,000 yds. brick	G. E. Neumann, County Clerk.
Florida	Ocala	Aug. 20	Imp. roads	E. F. Hennessey, Town Clerk.
Ohio	Cincinnati	Aug. 23	Constn. 7,500 yds. brick, 2,550 macadam	H. C. Sistrunk, City Clk.
Iowa	Dubuque	Aug. 24	Constn. 47½ miles roads	County Commissioners.
Missouri	Sedalia	Aug. 24, noon	Constn. 2,500 miles gravel macadam rds.	City Clerk.
Mississippi	Forest	Aug. 26	Constn. 25 miles gravel & macadam rds.	Chas. McEntry, Chm. Dist.
Virginia	Gordonsville	Aug. 26	Macad. Main street	G. A. McIlheney, Sec'y Comrs.
Illinois	Kankakee	Aug. 30 (about)	Constn. 65,000 sq. yds. vit. brick paving	F. A. McIlheney, Sec.
Mississippi	Laurel	Sept. 1	Constn. brick or creosoted wood pav't, 60,000 yds.	W. A. Brown, Engineer.
Nebraska	Beatrice	Sept. 4, 5 p.m.	Constn. sidewalks	B. W. Alpiner, Mayor.
Louisiana	Shreveport	Sept. 12	Constn. hard surface permanent rdwy, 5 miles	J. H. Crawford, City Clk.; Iowa
South Carolina	Columbia	Sept. 14, noon	Maintain roads	Eng. Co., Clinton, Ia.
				Super. Architect, Wash., D. C.
				J. T. Bullen Co., Engr.
				County Supervisors.



## BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>SEWERAGE</b>				
Tennessee	Chattanooga	Aug. 6, 11 a.m.	Constn. brick & pipe sewers	A. N. Sloan, Commissioner.
New York	Brooklyn	Aug. 6, 10.30 a.m.	Constn. sewers & tanks at hospital	Board of Health.
Ohio	Cincinnati	Aug. 6	Constn. main & lateral sewers	V. T. Price, Dir. Pub. Ser.
Wisconsin	Marionette	Aug. 6	Constn. sewers in several streets	City Clerk
Ohio	Vinton	Aug. 6	Constn. clay pipe sewers in several sts.	W. E. Klingaman, City Clk.
Pennsylvania	Glen Mills	Aug. 8	Constructing disposal plant	F. H. Nibecker, Supt.
Missouri	St. Louis	Aug. 9	Constn. 2d section No. Harlem sewer	W. T. Findly, Sec. B. P. I.
Maine	Newport	Aug. 7, 2 p.m.	Constructing sewers in several streets	E. R. Leach, Chm. Select.
Ohio	Hamilton	Aug. 9	Constructing storm sewers	Director Pub. Service.
Wisconsin	Madison	Aug. 9	Constructing 36-in. clay pipe sewer	O. S. Norsman, City Clerk.
Minnesota	Duluth	Aug. 9, 10 a.m.	Constn. sanitary sewer	O. G. Olsen, Pres. Bd. Pub. Wks.
Ohio	Massillon	Aug. 9, noon	Constn. sanitary sewer	J. A. McLaughlin, Clk. D.P.S.
Massachusetts	Marion	Aug. 10, 8 p.m.	Constn. sanitary sewer system	C. H. Graham, Vill. Recdr.
Minnesota	Duluth	Aug. 10, 7 p.m.	Constn. sewer	Sewer Commissioners.
North Dakota	Minot	Aug. 12, 10 a.m.	Constn. sewer	O. G. Olsen, Pres. Bd. Pub. Wks.
Ohio	Ashtabula	Aug. 12	Constructing 4 miles sewers	City Clerk.
Ohio	Cincinnati	Aug. 12	Constg. abt. 2 miles sewers & appurtn'ces.	M. N. Turner, Pres. Bd. Pub. Ser.
Iowa	Waterloo	Aug. 12, 7.30 p.m.	Constn. a number of sewers	V. P. Price, Dir. Pub. Ser.
Pennsylvania	New Castle	Aug. 12, 8 p.m.	Constn. storm sewer	R. L. Degon, City Clk.
Pennsylvania	Lansdale	Aug. 12	Constn. sewer system and sewage disposal wks.	Perry Williams, County Clk.
Connecticut	Hartford	Aug. 13, 11 a.m.	Constn. sewers in several streets	S. D. Conner, Boro. Sec'y.
Missouri	St. Louis	Aug. 13	Constg. sewers Harlem Creek Dist. No. 5.	Bd. Contract & Supply.
Indiana	Hobart	Aug. 13	Constructing sanitary sewers	Board Public Improvements.
Ohio	Toledo	Aug. 13	Constructing sewers in several streets	W. G. Black, Town Engineer.
Connecticut	Hartford	Aug. 13, 11 a.m.	Constg. sewers in several streets	Director Public Service.
Indiana	Indianapolis	Aug. 13, 10 a.m.	Furnishing sewer tile, etc.	Board Contract & Supply.
Pennsylvania	Fairview	Aug. 13, 1 p.m.	Constn. disposal plant	County Comrs.
Connecticut	Waterbury	Aug. 13, 8 p.m.	Constn. sewers & appurtn'ces	F. G. Walton, Pres. Hospital.
Ohio	Springfield	Aug. 14	Constn. abt. 3 m. pipe sewers & appurtn'ces	R. A. Cairns, City Engineer.
Louisiana	Morgan City	Aug. 14, 2 p.m.	Constn. water works and sewerage	P. H. Weber, City Engineer.
Texas	LaGrange	Aug. 14, 8 p.m.	Const. 28,000 ft. 6 to 10-in. clay pipe swrs, etc.	M. D. Shannon, Mayor.
Kentucky	Louisa	Aug. 15	Const. 1,000 ft. 30 to 36-in. single ring bk sewer; 8,400 ft. tile sewer and 23,000 lin. ft. concrete curb and gutter	H. W. Spreckles, Mayor.
Wisconsin	Janesville	Aug. 15, 2 p.m.	Constn. sewers in several districts	City Council.
New Jersey	Elizabeth	Aug. 15, 8.30 p.m.	Lower sewer pipe, repaving and building basins	J. A. Fathers, Chm. B. P. W.
Ohio	Springfield	Aug. 15	Constn. Indian Run sewer; cost, \$161,000	W. P. Neafsey, Street Comr.
Ohio	Canton	Aug. 15, noon	Constn. storm sewer and imp. street	Edw. Schaefer, Dir. B. P. Serv.
Indiana	Beech Grove	Aug. 15	Constn. trunk sewer system	Dir. of Pub. Serv.
Indiana	Indianapolis	Aug. 15	Constn. Sewers	M. H. Johnson, Town Clerk.
Iowa	Spencer	Aug. 16, 8 p.m.	Constn. sewer	Board Public Works.
Ohio	Akron	Aug. 16, noon	Constn. main trunk sewer	R. T. Turner, City Clerk.
New Jersey	Roselle Park	Aug. 17, 8 p.m.	Constn. storm sewer	R. M. Pillmore, Dir. P. S.
New Jersey	Plainfield	Aug. 19	Imp. contact sewer bed	A. M. Woodruff, Boro. Clerk.
Florida	Jacksonville	Aug. 19, 3 p.m.	Constn. several drains	J. T. MacMurray, City Clerk.
New York	Yonkers	Aug. 19	Constn. house sewer in New Place	L. D. Smoot, Engineer.
South Dakota	Aberdeen	Aug. 19, 10 a.m.	Constn. 1,100 ft. 8 and 10-in. pipe sewers	J. V. Mahoney, Sec. Bd. Con. & Sup.
Iowa	Dubuque	Aug. 24	Constn. 7,000 ft. 8-in. sewers	F. W. Raymond, City Aud.
Wisconsin	West Allis	Aug. 24	Constn. pipe sewer	City Clerk.
Texas	Clarksville	Sept. 1 (about)	Constn. sewers, cost \$4,500	Board Public Works.
<b>WATER SUPPLY</b>				
Wisconsin	Prairie Du Chien	Aug. 5, 8 p.m.	Constn. water mains	Water-Works Com.
New York	Amsterdam	Aug. 6	Repairing water main in river	J. P. Wilson, City Clerk.
Minnesota	Morris	Aug. 6, 8 p.m.	Constructing water main	C. B. Burpee, City Clerk.
Ohio	Cincinnati	Aug. 7, 10 a.m.	Furnishing 1,900 rubber pump valves	S. W. McGrath, Pur. Agent.
Nebraska	Grand Island	Aug. 7	Furn. pump, 3½ million gals. capacity	J. H. Miller, Water Com.
New Jersey	Perth Amboy	Aug. 7, 8.30 p.m.	Constn. 10 to 20-in. cast-iron mains	S. J. Mason, Engr.
New York	Albany	Aug. 7, 3 p.m.	Imp. water supply, Hudson River Hosp	Comrs.
Ohio	Portsmouth	Aug. 7	Furn'g pump & other machy, w.-wks.	J. M. Williams, Dir. Pub. Serv.
South Dakota	Henry	Aug. 8, 3 p.m.	Constructing water works	O. J. Breen, Town Clerk.
New York	Brooklyn	Aug. 8, 2 p.m.	Setting fire hydrants	H. S. Thompson, Com.
Minnesota	Red Lake Falls	Aug. 9	Constg. water works and drilling well	J. Parrault, City Clerk.
Michigan	Royal Oak	Aug. 10	Furnishing material for water-works	H. B. Brace, Vill. Clk.
Texas	Waco	Aug. 10	Constn. deep well	Peyton Randle, Chairman Com.
Texas	Henrietta	Aug. 12	Con. pump, plant, cent. pump, c-i main, &c.	Fountain-Shaw Eng. Co., Dallas
Iowa	Gilman	Aug. 12	Constructing water works	City Clerk.
Canada	Toronto, Ont.	Aug. 13	Furnishing cast iron pipes and specials	Board of Control.
Illinois	Geneseo	Aug. 13, 8 p.m.	Constn. casing and stairway for standpipe	J. D. Hill, Chm. Water Com.
Louisiana	Morgan City	Aug. 14	Constn. water works and purification plant	Mayor M. D. Shannon.
Iowa	Defiance	Aug. 14, 7.30 p.m.	Constructing water works	City Council.
New Jersey	Freehold	Aug. 14, 11 a.m.	Imp. flume in Como Lake	J. M. Corlies, Director.
Ohio	Akron	Aug. 15	Constn. 30-in. pipe line	Director Public Service.
Texas	Dallas	Aug. 26, 2 p.m.	Constn. water purification plant	J. B. Winslett, City Sec.
Ohio	Akron	Aug. 15	Constructing reservoir and mains	R. M. Pillmore, Dir. Pub. Ser.
New Jersey	Gloucester City	Aug. 15, 8 p.m.	Furnishing 4-in. water meter	Frank Butler, Chn. Com.
New York	Hobart	Aug. 16	Constn. concrete dam, mains, filter, &c.	Hobart Water Co.
Illinois	Great Lakes	Aug. 19	Constn. concrete sediment basin	Navy Dept., Washington.
New Jersey	Trenton	Aug. 19, 1 p.m.	Constn. water tank & extensions at Skillman	D. F. Weeks, Supt.
South Carolina	Blackville	Aug. 20	Cost. wtr wks. cost, \$21,000; swge systm, \$12,000	J. N. Johnston, Eng., Florence.
Louisiana	New Orleans	Aug. 24, noon	Const. reinforced concrete siphon	F. S. Shields, Sec'y.
Illinois	Anna	Aug. 26	Constn. concrete reservoir, 3½ miles mains, filter plant, &c.	State Board; Dabney & Maury, Chicago, Engr.
Ohio	Swanton	Aug. 27	Imp. water works	W. B. Elwell, Clerk.
Canada	Winnipeg, Man.	Aug. 28	Furnishing 88,000 ft. 36-in. pipe	Bd. of Control.
Ohio	Lima	Aug. 21	Constn. reservoirs at hospital	D. F. Whitney, Sec.
Oregon	Clatskanie	Sept. 1 (about)	Constn. water works, cost \$30,000	J. M. Blackford, City Recorder.
Iowa	Sioux City	Sept. 3	Enlarging reservoir &c. tank	G. B. Healy, Commissioner;
So. Carolina	Blackville	Sept. 17	Constn. water works, cost \$22,000	D. H. Maury, Engr., Chicago.
New Jersey	Camden	Sept. 19, 8 p.m.	Constn. 5,000,000 gal. pumping plant	City Clerk.
<b>LIGHTING AND POWER</b>				
Wisconsin	Paupum	Aug. 6, 2 p.m.	Constructing power plant for hospital	State Board of Control.
Ohio	Cleveland	Aug. 9	Furnishing meters, cop. wire, poles, &c.	Director Public Service.
Wisconsin	Madison	Aug. 13	Furnishing electric work for capitol	L. W. Porter, Sec. Commission.
New York	Albany	Aug. 14	Constructing conduit, steam mains, &c.	State Hospital Commission.
Canada	Regina, Sask.	Sept. 14	Furn. steam turbine unit, switchb'd, &c.	A. W. Pool, City Clerk.
Indiana	Fort Wayne	Aug. 15, 3 p.m.	Constn. additions to lighting plant	F. G. Benoy, Chrmn. B. P. W.
Texas	Galveston	Aug. 15, noon	Furn. surface condenser, pump, etc.	J. D. Kelley, City Sec'y.
Indiana	Indianapolis	Aug. 15	Maintain incandescent street lights for 5 years	Board Public Works.
Dist. Columbia	Washington	Aug. 15, 2 p.m.	2½-inch lead-covered cable, etc.	M. A. Fitzsimmons, Village Clerk.
New York	White Plains	Aug. 22, 7.30 p.m.	Furn. underground cable, ci-i. lamp-posts, street sign frames	C. H. Rudolph, Chrmn. Comrs.
Louisiana	New Orleans	Aug. 23	Furn. 43 arcs, 1200 c.p. & 700 incan., 20 c.p.	Board Trustees.
Indiana	Greencastle	Aug. 26	Furn. & erect. piping aux. for pwr hse, No. 2.	F. S. Shields, Sec. Sew. & Watr. Bd.
Canada	Edmonton, Alta.	Aug. 27	Light. city for prd of 10 yrs., begng July 1, 1913	S. C. Sayers, City Clk.
Florida	St. Petersburg	Sept. 19, noon	Constn. gas plant	City Commissioners.
			Supply, city with gas	W. F. Devine, City Clk.

## BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>FIRE EQUIPMENT</b>				
W. Virginia	Charleston	Aug. 5	Furnishing 500 ft. fire hose	O. A. Petty, Com. Pub. Saf.
South Dakota	Sioux Falls	Sept. 5, 9 a.m.	Constrn. Central fire station	W. C. Leyse, City Auditor.
Montana	Missoula	Aug. 7, 10 a.m.	Installing automatic fire alarm	W. H. Smith, City Clk.
Michigan	Bay City	Aug. 9, 10 a.m.	Constrn. wiring, &c., Fire Dept H'qtrs.	E. E. Prohazka, City Cont.
Ohio	Niles	Aug. 10, noon	Constrn. fire house	J. E. Tregaskis, Clk.
Minnesota	Duluth	Aug. 14, 2 p.m.	Furn. auto comb. chemical & hose wagon.	Fire Commissioners.
Minnesota	Austin	Aug. 17, 8 p.m.	Constrn. fire house	F. Cronon, City Recorder.
Utah	Logan City	Aug. 20	Furn. motor comb. pump, engine hse & chmcl wgn	H. G. Hayball, Supt. Pub. Safety.
Indiana	Fort Wayne	Aug. 20, 5 p.m.	Furn. motor drvn. com. chem & hose wag.	Board Public Safety.
New Jersey	Trenton	Aug. 21, 2.30 p.m.	Furnishing 1 extra first steam fire engine	G. B. La Barre.
Canada	Saskatoon, Sask.	Aug. 26, noon	Furn. 1 motor comb. chem. and hose wagon and 1 motor-driven city service truck	City Commissioners.
Texas	Dennison	Aug. 30, 8 p.m.	Furn'g auto combin'n chem. & hose wagon.	J. D. Yocom, City Secy.

## BRIDGES

California	San Bernardino	Aug. 6	Constg. truss h'way bridge, 4 60-ft. spans.	County Supervisors.
Pennsylvania	Hollidaysburg	Aug. 6 noon	Constg. 5 reinforced concrete bridges	W. F. Hostler, County Clerk.
New Mexico	Santa Fe	Aug. 6 8 p.m.	Constructing 3 bridges	County Clerk.
Indiana	Crown Point	Aug. 6 noon	Constructing 6 bridges	C. A. Johnston, County Auditor.
Florida	Deer Field	Aug. 6	Constructing bridge 124 ft. long	H. B. Sundels Jr., City Clk.
Minnesota	Olivia	Aug. 6	Constructing concrete bridges	J. L. Johnston, Co. Aud.
Canada	Moose Jaw	Aug. 9	Constg. reinforced concrete dam & bridge.	E. B. Bonnell, City Clerk.
Virginia	Culpeper	Aug. 10, noon	Constrn. three concrete bridges	P. St. J. Wilson, Comr.
Kansas	Lincoln	Aug. 10, noon	Constrn. 7 concrete bridges & culverts	H. W. Herren, Chrmn Co. Com.
Indiana	Lawrenceburg	Aug. 12	Constrn. two bridges	W. S. Fagaly, County Auditor.
Alabama	Seale	Aug. 12	Constrn. 90-ft. concrete arch bridge	County Commissioners.
Texas	Powerton	Aug. 12	Constructing steel highway bridge	County Commissioners.
Ohio	Ashland	Aug. 14, noon	Constrn. substructure	County Commissioners.
Ohio	Cincinnati	Aug. 16	Constrn. concrete bridge	Albert Reinhardt, Clk.
Pennsylvania	Franklin	Aug. 16, 1 p.m.	Constrn. reinf. concrete bridge	J. L. Shaffer, Chn. Co. Comrs.
Ohio	Cleveland	Aug. 21, 11 a.m.	Constrn. bridge work	J. F. Goldenbogen, County Clerk.
Ohio	Pindlay	Aug. 23	Constrn. two 90-ft. spans	County Commissioners.
Ohio	Cleveland	Aug. 24	Constrn. steel arch and shoes	County Commissioners.
Canada	Calgary, Alta.	Aug. 31 (ext. date)	Constrn. 3 reinforced concrete bridges	J. M. Miller, City Clk.
Louisiana	Tallulah	Sept. 4	Constrn 3 bridges	W. H. Harvey, Sec'y.

## MISCELLANEOUS.

Washington	Tacoma	Sept. 4, 5 p.m.	Clearing land and filling with earth	P. F. Clark, City Clerk.
Ohio	Youngstown	Aug. 5, noon	Furnishing one automobile	Dir. Pub. Serv.
Massachusetts	Lowell	Aug. 5, 10 a.m.	Constrn. stable	Lawrence Cummings, Comr.
New Jersey	Perth Amboy	Aug. 7, 8.30 p.m.	Furn'g automobile truck, 1,500 lbs. capac.	A. H. Crowell, Supt. W. Comrs.
Dist. Columbia	Washington	Aug. 9, 2 p.m.	Furn. gasoline motor truck	C. R. Rudolph, Chrmn. Comrs.
Texas	Houston	Aug. 12	Remodelling jail	J. B. Ashe, Co. Auditor.
Massachusetts	Boston	Aug. 12	Constrn. shelter building	Park Commissioners.
Ohio	Akron	Aug. 14	Furn. automobile for water works	Director Pub. Service.
New Jersey	Freehold	Aug. 14, 11 a.m.	Constrn. concrete retaining wall	J. M. Corlies, Director.
Ohio	Springfield	Aug. 15, noon	Furn'g fire wagon, asp. mixer heater, tool	Dir. Pub. Serv.
California	San Francisco	Aug. 21	Constrn. hospital buildings	Ed. Pub. Wks.

## STREET IMPROVEMENTS

**Huntsville, Ala.**—Proposition has been submitted to County Commissioners to construct next model State highway from Huntsville to Tennessee River, which is distance of about ten miles.

**Sacramento, Cal.**—State Highway Commission has accepted survey for a State road through Redding on way from Sacramento Valley into Siskiyou County and to Southern Oregon. This road will be built and another one decided upon is road from Sacramento to Davis, Yolo County. This will probably be most expensive piece of road State will build under its \$18,000,000 bond issue.

**Bakersfield, Cal.**—Plans are being made for good road improvements to cost \$5,000,000.

**Los Angeles, Cal.**—Report of legislative committee to city council, recommending that city engineer be instructed to prepare ordinance of intention to pave South Main st. from Thirty-sixth place to Manchester ave., has been adopted by council.

**Redwood City, Cal.**—Scheme to build \$1,500,000 system of boulevards in San Mateo county has been accepted by Board of Supervisors, and it was decided to hold bond election for this amount on December 16.

**Riverside, Cal.**—Petition to macadamize North Mine st. and road leading north over Santa Ana River will be in circulation soon, according to information received by city council.

**San Francisco, Cal.**—City Engineer has recommended the extension of Minna st. through block from Tenth to Eleventh. Strip of land will have to be bought, and cost of it is estimated at \$8,500. Extension of Vulcan st. to Ord is also recommended, cost for land in this case being estimated at \$3,500.

City Engineer has reported that cost of repaving Twenty-fourth st., between Howard st. and Potrero ave., would be \$21,826, and that paving of city's portion of Lincoln way from Twentieth to

Thirty-fourth ave. would be \$39,674. Budget appropriation of \$40,000 has been made by Supervisors for paving of Lincoln way in front of Golden Gate Park from Twentieth avenue westward.

**San Mateo, Cal.**—Bond issue of \$1,200,000 for construction of county roads is being agitated.

**Willows, Cal.**—About forty miles of roads will be under construction in Supervisor Willie's district soon after August 8, when contracts will be let by supervisors. About mile and a half of heavy road work will be let in Supervisor Hurlburt's district at same time.

**Woodbridge, Cal.**—State Highway Commission has endorsed Supervisor Newton's plan to widen lower Sacramento road at this place. Commission will carry out project as outlined. Road will be made four feet wider on each side.

**San Francisco, Cal.**—Roads, for construction of which bids will be called, are to be located as follows: On general route No. 4, from Sacramento to Los Angeles, via the San Joaquin valley, 11.7 miles in Stanislaus County, from the Merced County line to a point one and one-half miles north of Ceres. Bituminized concrete. High estimate, \$90,000. On general route No. 4, seven miles in Madera County, from a point one mile south of California to the Merced County line. Bituminized concrete. High estimate \$56,000. On general route No. 4, same as foregoing, ten miles in Madera County, from the Fresno County line to Madera City. Bituminized concrete. High estimate, \$81,000. On general route No. 4, same as foregoing, 7.5 miles in Fresno County, from Fresno City to the Madera County line. Bituminized concrete. High estimate, \$78,000. On general route No. 2, San Francisco to San Diego, via Los Angeles, 8.6 miles in San Diego County, from San Diego to Encinitas. Bituminized concrete. High estimate \$66,000. On general route No. 4, Sacramento to Los Angeles, via the San Joaquin valley, ten miles in Merced County, from the north county line of Merced to

Arena. Bituminized concrete. High estimate, \$80,000.

**Anacostia, D. C.**—Various street improvements have been ordered.

**Atlanta, Ga.**—Regrading of Ivy st. is being considered.

**Augusta, Ga.**—Mayor Barrett has directed Commissioner of Public Works Nisbit Wingfield to prepare plans for paving of Walton Way.

**Fort Wayne, Ind.**—Resolutions have been adopted for paving number of alleys with brick.

**Marion, Ind.**—Commissioners of Grant, Wabash and Miami counties have ordered construction of C. A. Darby road on line between Wabash county on north and Grant and Miami counties on the south.

The C. A. Darby road is 8,115 feet long. The estimate of cost of construction is \$7,585. Fremont Wilson, of Marion is the engineer for work.

**South Bend, Ind.**—Further details in plans of George E. Kessler, of Kansas City, Mo., for proposed boulevard and enlarged park system, most important of which is decision to convert Lafayette st. into principal boulevard of city, have been made public by Board of Park Commissioners.

**South Bend, Ind.**—Resolutions for number of improvements have been confirmed by board of public works. List follows: Pavement of first alley north of North Shore drive; grade, curb and walk on Lincoln st.; grade, curb and walk on 19th st.; pavement of second alley south of Wayne st., and pipe sewer on Miner st.

**Clinton, Ia.**—Bids for paving Second and Third sts. were rejected on account of informality in the low bid, that of P. V. Clark at \$4,125 and \$1,531, respectively.

**Indianapolis, Ind.**—Plans and specifications have been prepared by Henry W. Klausmann, City Engineer, for paving Wyoming st. and Thirty-first st., from Delaware st. to Central ave. Estimate of cost of former is \$19,870, and of latter \$16,200. Both estimates are based on



wood block material. Plans probably will be submitted to Board of Public Works for adoption.

**Mishawaka, Ind.**—Resolution adopting final estimate on Bridge and North Race st. paving improvements has been accepted.

**E. St. Louis, Ill.**—Board of Local Improvements has authorized improvement of State street from Thirty-fourth street to city limits at Edgemont, and also purchase of tract of ground near Church Lane for \$20,000 to widen street. Estimated cost of improvements, including purchase of ground, is \$315,000.

**Springfield, Ill.**—Creosote block paving on East Adams st., from Third to Tenth st., has been ordered by board of local improvements.

**Lexington, Ky.**—Ordinances have been passed for improvement of various streets.

**Shelbyville, Ky.**—Contract with Southern Asphalt Tonnage Company, of Louisville, for reconstruction of seven squares on Main st. has been annulled.

**Mt. Sterling, Ky.**—Special meeting has been held by City Council and bids opened for paving of Bank and Locust sts. Two bids were received, one from G. H. Strother, of this city and other from the Central Construction Company, of Lexington.

Mr. Strother's bid was \$2.28 per square yard for Bank st. and \$2.36 for Locust st. Bid of the Lexington company was \$2.30 per square yard for both streets.

**Lexington, Ky.**—Five bids have been submitted by four manufacturers for road rollers as follows: Austin-Weston Company, Chicago, gasoline 10-ton double cylinder roller, \$2,500; Huber Manufacturing Company, Marion, Ind., steam 10-ton roller, single cylinder, equipped with steam steering device, \$2,040; Kelly-Springfield Company, Springfield, O., combination steam roller, \$2,000; same firm double cylinder steam roller, \$2,500; J. I. Case, a Wisconsin firm, which has a local representative, steam roller, \$2,035.

**White Castle, La.**—Mayor and City Council are discussing advisability of building 8,000 ft. of gravel streets.

**Bangor, Me.**—The governor and council have voted to expend total of \$16,100 of automobile registration fund for highway improvement.

**Elkridge, Md.**—Plan is being considered for construction of Baltimore-Washington boulevard through village of Elkridge.

**Cumberland, Md.**—Ordinance for paving South Lee st., between Green and Paca, has passed.

**Boston, Mass.**—Plans of A. A. Shurtleff for reconstruction of southerly roadway of Commonwealth ave., between Massachusetts ave. and the Fenway, have been approved.

**Haverhill, Mass.**—Orders have been passed for concrete walks on Hamilton ave. and Broadway and for \$500 additional work on Kenosia st., which will complete street to lake and make it all one job.

**Holyoke, Mass.**—City Engineer has been instructed to prepare plans for widening of Northampton st. from old Holyoke-Northampton line to Kenilworth.

**Thief River Falls, Minn.**—County Commissioners of Pennington County have announced meeting for final hearing on petition for construction of state rural highway No. 1. Immediately following this hearing, contracts will be let for construction of road.

**Camden, N. J.**—Ordinances have been passed directing paving of Vine st. from Ninth to Tenth and Byron st. from Fifth to Sixth with vitrified brick.

Petitions have been received for paving from Mt. Ephraim ave. to Ninth st. and Berkley from West st. to Broadway with vitrified brick.

**Elizabeth, N. J.**—Bids will be received by Nathan R. Leavitt, County Collector, at his office, 130 Broad st., Elizabeth, N. J., until Aug. 15, 1912, at 10 a. m., for purchase of County road bonds of County of Union, amounting in the aggregate to \$145,000.

**Grand Rapids, Mich.**—County good Roads Commissioners are considering question of buying road machinery to undertake work of reconstructing highways in Kent County, for which bond issue of \$600,000 was voted.

**Paulsboro, N. J.**—The Paulsboro Street and Highway Committee has ordered oil placed on all streets to keep dust down.

**Perth Amboy, N. J.**—Ordinance has been passed to pave Mechanic st., from Fayette st. to Washington st., with two-inch asphalt blocks.

**Rahway, N. J.**—Common Council is discussing as to what action should be taken toward improving Central ave., from Irving st. to Esterbrook ave.

**Spotswood, N. J.**—Borough Clerk George W. DeVoe has been instructed to draw ordinance providing for establishment of grade on Mundy ave., according to plans and specifications as prepared by Larson & Fox, borough engineers.

**Springfield, N. J.**—Road Committee of Board of Freeholders has received bids for building Morris, Springfield and Westfield aves. in Springfield township. Work when completed will represent cost of approximately \$75,000.

**Jersey City, N. J.**—Improvement of Van Winkle ave. has been authorized.

**Millville, N. J.**—Ordinance has been introduced for paving High st., Main and Broad sts.; \$50,000 bonds will be issued to pay for work.

**Newark, N. J.**—Ordinance has passed thrice reading for paving Eleventh ave. from So. Eleventh to So. Twelfth sts. with brick.

**Jersey City, N. J.**—Four stretches of boulevard are to be repaved next year. For that purpose Boulevard Commission demands that Freeholders issue bonds for \$110,000. Repairs and their cost are planned by commission as follows:

Bayonne, from Fifty-first st. to the Morris Canal, to cost \$21,120; Union Hill, from Hackensack Turnpike to Fisher ave., North Bergen, \$53,900; Weehawken, from King st. to the bridge over the old railroad cut, \$26,400; Hoboken, from Thirteenth to Fourteenth st., \$8,250. Total, \$109,670. One-tenth of total amount is to be paid for engineers and supervision of construction.

**Syracuse, N. Y.**—Alderman Haley has presented petition for opening of Maltbie st. to Spencer st., distance of 50 feet, and opening of Spencer st. from its present terminus at Sand st. through to boulevard.

**Syracuse, N. Y.**—Harrison st., between Crouse and University aves., will be paved at a cost of \$6,700.

**Syracuse, N. Y.**—Alderman Ludwig has introduced petition for grading of May av., from south side of lot 1, in Eastman tract, to Cortland ave.

**Scotia, N. Y.**—Paving of Ballston ave. is being considered.

**Scotland Neck, N. C.**—Halifax County Good Roads Association, John L. Patterson, Roanoke, president, is making progress in its work for \$300,000 bond election. It is thought election will be held late in fall or early next year.

**Toledo, O.**—Improvement of 5½-mile stretch of Detroit-Toledo highway through Erie township, Michigan, probably will be somewhat delayed by fact that bids received for proposed improvement are in excess of \$40,000, amount which was voted for improved road at special township election.

**Toledo, O.**—Board of County Commissioners of Lucas County, will sell to highest responsible bidder three thousand (\$3,000) dollars of bonds at its office in Toledo, on the 27th day of Aug. 1912, and sealed bids will be received by County Auditor for purchase of said bonds up to 10 o'clock, a. m., of said date. Bonds are issued to provide stone and gravel road building fund.

**McKeesport, Pa.**—Entire hill portion of Fawcett ave. will be repaved.

**Seranton, Pa.**—Ordinance has been passed providing for erection and construction of culvert on Elm st., between Prospect ave. and South Webster ave. Ellsworth Kelly is City Clerk.

**South Bethlehem, Pa.**—It has been decided that \$2,000 appropriated to Street Committee to be used for repairing Main st., between Bridge st. and Bridge st., should instead be used for same purpose on Third ave.

**Seranton, Pa.**—Ordinance has been passed authorizing grading, paving and curbing on Mahon Court, Olive st. to Gibson st., Tenth Ward. Ellsworth Kelly is City Clerk.

**St. Marys, Pa.**—Construction of State road between this place and Ridgway has been authorized. Road will be constructed of brick or asphalt macadam, with chances favoring former. State is in favor of brick on account of wearing properties.

**Seranton, Pa.**—Ordinance has been passed authorizing grading, paving and curbing of Luzerne st. Ellsworth Kelly is City Clerk.

**Morgantown, Pa.**—City Solicitor is preparing ordinance for bond issue for paving and sewerage.

**Portage, Pa.**—Special meeting of Portage Council will be held when final action will be taken on ordinance on bonds to provide funds for paving of Main st. from Washington st. to Johnson ave.

**Philadelphia, Pa.**—With opening of bids for repairs to country roads, Chief Connell, of Highway Bureau, announced that there are 228 contracts for street and country roads repairs under which contractors are at work, and that 23 additional contracts for grading and street and road repairs are about to be executed. Amount of street work about to be contracted for will reach \$300,000.

**Philadelphia, Pa.**—Bids have been re-opened for repairs to Greene st., from Manheim to Tulpehocken, about 15,300 square yards of bituminous material, as follows: R. P. Bennis, \$1.73; David McMahon, \$1.23; Mack Paving & Construction Co., \$1.55; J. F. Shenley Co., \$1.38, and the Union Paving Co., \$1.35.

**Sioux Falls, S. D.**—Resolutions have been adopted for improvement of various streets. Walter C. Leye is City Auditor.

**Knoxville, Tenn.**—Stakes for grading of Emory road from connecting pike entering Corryton to ford on Big Flat creek, twenty miles north of Knoxville, have been set and bids for grading road are soon to be awarded by County Road Commission. Stretch of road is only about one mile in length.

**Pulaski, Va.**—Special election held upon question of issuing \$100,000 bonds for good roads has been carried.

**Nashville, Tenn.**—Bill has been adopted authorizing vote on issuance of \$150,000 bonds for opening and widening streets and alleys.

**Fort Worth, Tex.**—City Commission has ordered paving of East Third st.; also Copps st., from College ave. to Louisiana ave.

**El Paso, Tex.**—Question of voting \$150,000 worth of bonds for purpose of building road from Fabens to Fort Quitman, point marking limit of eastern county line, will be submitted to the voters of county.

**Portsmouth, Va.**—Block on third st., between Nelson and Fayette sts., will be paved with new style of paving in roadway.

**Jonesville, Wis.**—City will purchase either a new street sweeper or flusher.

**Pugallup, Wash.**—Council has adopted resolution providing for paving of Pioneer ave. Bids will be advertised for immediately.

#### CONTRACTS AWARDED.

**Opelika, Ala.**—By Lee County Commissioners for construction of model State highway in this county to W. H. Wynn, of Dadeville. Model road will be built beginning at city limits and extending probably four and one-half miles on the Beulah rd. Sum available for work is \$8,000.

**Orange, Cal.**—To Los Angeles Paving Company for paving with asphalt 11,000 sq. ft. Plaza at 7 cents.

**Fresno, Cal.**—To California Road and Street Improvement Company at \$19,479 for paving Merced st. for distance of six blocks.

**Long Beach, Cal.**—To Fairchild-Gilmore Wilson Company for paving West Broadway and other streets, aggregating \$50,000.

**Wilmington, Del.**—By Newcastle County Commissioners to Harrigan Construction Co., Ford Bldg., for construction of 1 1-10 miles of roadway.

**Idaho Falls, Idaho.**—For 36,167 sq. yds. bitulithic pavement, 1,560 sq. yds. resurfacing old macadam and for curbing, etc., from plans of Frank Beach, of Idaho Falls, to Warren Construction Company, of Portland, Ore., for \$36,811. Other bidders: Elwood Wiles, Portland, Ore., \$93,066; James Kennedy Construction Co., Salt Lake City, Utah, \$92,267; Strange-Maguire Paving Company, Salt Lake City, Utah, \$94,074; McKay & Reed, Salt Lake City, Utah, \$96,465.

**Aurora, Ill.**—For paving South Broadway with brick, to J. E. Salfisberg & Co., of Aurora, Ill., for \$28,158.

**Bloomington, Ill.**—For paving Olive st., to I. D. Lain, of Bloomington, for \$8,100.

**Lawrenceville, Ill.**—For approximately 10,420 sq. yds. pavement on concrete foundation, to Patton-Lanahan, of Vincennes, Ind., for hard road pavement at \$13,000.

**Moline, Ill.**—By Board of Local Improvement, for paving Twenty-fifth st. with asphalt, to McCarthy Improvement Co., of Davenport, Ia., for \$12,679. Lyle Payton is City Engineer.

**Moline, Ill.**—By Board of Local Improvements to J. D. Lane, Bloomington, Ill., at \$12,687.80, for asphalt paving in Twenty-third ave., from Fifteenth to Twenty-seventh st.

**Normal, Ill.**—For paving Normal and Gregory aves., to Roy L. Williams for \$10,319.

**Quincy, Ill.**—For paving streets around Washington Park with creosote blocks, to Henry Rees, of Quincy, for \$24,417.

**Peoria, Ill.**—By City Clerk, for brick paving for Columbia Terrace, to Canterbury Bros. for \$19,555, and for paving Stanley st., to D. A. Myers, \$5,664.

**Waukegan, Ill.**—By Board of Local Improvements to Boyce Construction Co., Chicago, at \$21,169, for 18,000 sq. yds. of asphaltic concrete paving.

**Winnnetka, Ill.**—By Village Board to McCugo & Bullock, Waukegan, Ill., at \$20,000, for paving.

**Delphi, Ind.**—For construction of gravel road on line between Carroll and Tippecanoe County, to J. W. F. Thomas for \$6,185.

**French Lick, Ind.**—To Edw. L. Sheehan and David Renfrow, of Lafayette, for brick pavement on concrete base and combination curb and gutter for about \$63,000.

**Springfield, Ill.**—J. Q. Adams, Morrisonville, was low bidder for two miles of Peoria road at \$1.05 for 6-in. and \$1.33 for 8-in. depth and 28 cts. per foot for tile.

**Fort Wayne, Ind.**—To Grace Construction Company, paving Harrison from Grand st. to Butler st., and Moellering Company for paving walks on Ewing st. from Jefferson to Baker sts.

**Bushville, Ind.**—By County Commissioners for Leisure macadam road on Posey-Ripley township line to W. H. Robbins for \$10,090.

**Mishawaka, Ind.**—By Board of Public Works on paving improvements in Merrifield additions to Rankert & Eggleston, figures submitted being \$1.40 per square yard for asphaltic concrete.

**Bloomfield, Ind.**—By City Council for paving to Bryant Improvement Co., of Waterloo, for 3 miles of paving asphaltic concrete, for \$68,640.

**Junction City, Kan.**—For paving as follows: To John Ritchie & Son, of Topeka, for brick block on 5-in. base, \$1.825 per sq. yd., total \$11,739, and same company for asphalt at \$1.92 per sq. yd., total \$1,890; also to same company on July 23 for No. 1 brick block on 5-in. base at \$1.825, total \$5,123, and on July 20 to O. C. Chapin, of Leavenworth, for Dolarway pavement on 6-in. base at \$1.17 per sq. yd., total \$39,095. W. Van Buck is City Engineer.

**Lexington, Ky.**—By city to C. H. Dougherty for construction of concrete sidewalks, curb and gutter on Jefferson st., at following prices: Concrete sidewalk, 15 cents per sq. ft.; concrete curb, 50 cents per lin. ft.; concrete curb and gutter combined, 60 cents per lin. ft. Jas. J. O'Brien, City Clerk.

**Mt. Sterling, Ky.**—To Central Construction Company, of Lexington, was granted contract to build and construct about 5,000 yds. of brick streets in Mt. Sterling by City Council, at \$2 per sq. yd. Work will begin at once. Streets to be bricked are Bank and Locust, which will complete work in business section.

**Rockland, Me.**—To D. F. Griffin & Brother of Portland, paving Main st. from Rankin block to Camden st., at \$5,735.45.

**Baltimore, Md.**—By Board of Awards to B. Padgett Company for 1912 and 1913 sheet asphalt and bituminous concrete repair contracts at about \$500,000.

**Easton, Md.**—By Street Improvement Commission to Elder Paving & Contracting Co., Baltimore, for 60,000 sq. yds. of grading and paving.

**Westfield, Mass.**—To Daniel O'Connell's Sons Contracting Co., of Holyoke, for paving of North Elm st., Westfield, at bid of \$12,300.99. Work calls for laying of concrete base and recutting of pavement blocks and cement points. Holyoke concern had contract for Elm st. job a year ago. Local company had three competing bidders, as follows: E. E. Roberts, of Boston, \$15,536.15; John L. Barry, of Westfield, \$15,896.50; Archambault & Flége, of Waterbury, Conn., \$16,228.72.

**Sparta, Mich.**—To McDermott & Cooper, of Grand Rapids, to pave with brick on Division st. at \$12,423.

**St. Paul, Minn.**—By City Council as follows for furnishing material for repaving Fourth and Fifth sts.; Republic Creosoting Co., creosoted blocks, \$1.65 per sq. yd., f.o.b. St. Paul; Chaska Brick Co., sewer brick, \$8.18 per thousand; St. Paul Crushed Stone Co., crushed rock, ground; St. Paul Lime & Cement Co., cement, \$1.18 per bbl., delivered. \$1.40 per cu. yd., delivered on the

**Detroit, Mich.**—For paving and repaving streets as follows: T. E. Curries is

lowest bidder for paving Defer Place from Jefferson to Kercheval with cedar blocks at \$2.44; Holcomb ave., from St. Paul to Kercheval with cedar blocks at \$2.37, and Meldrum ave., from Gratiot to Forest with cedar blocks at \$2.46; F. Porath & Son are lowest bidders for paving La Salle ave., from Warren to McGraw with cedar blocks at \$2.46; Otis Cement Construction Co. is lowest bidder for paving Alley No. 248 with concrete at \$2.01 and Alley No. 250 with brick at \$3.17, and W. W. Hatch & Sons Co. are lowest bidders for paving Alley No. 249 with concrete at \$1.82 per sq. yd.

**Rochester, N. Y.**—By Board of Contract and Supply for improvement work, including that for brick pavement in Kelly st., which went to Schroeder-Hicks Company for \$19,832. Contract for Medina block pavement in Scott pl. to Aikenhead, Bailey & Donaldson for \$6,405. That for Medina block pavement in Stillson st. went to William H. Sours, 2d, for \$7,583.50, and for asphalt pavement in Woodbine st. to Whitmore, Rauber & Vicinus for \$8,755.50. Julius Friedrich Company was awarded contract for Avenue B asphalt pavement.

**Brooklyn, N. Y.**—Bids have been opened, August 30, for fifteen highway contracts in Queens, lowest bids aggregating \$591,786. Most important undertaking is that for regulating and repaving with granite blocks split and redressed on concrete foundation Vernon ave., Long Island City, from south side of Fulton ave. to south side of Fourth st., Hunter's Point, skirting East River, all way through Ravenswood and Astoria, distance of three miles. Lowest bidder is Astoria Construction Company and amount of bid is \$211,645. Another important undertaking is regulating, grading, curbing and paving with granite blocks on concrete foundation Broadway in town of Flushing, from Tenth st., Bay Side, to Main st., Douglaston, about a mile. Lowest bidder on this is Newman & Carey, \$47,571. An equally notable public improvement is repaving in Jackson ave., all through business section of Long Island City, from entrance of Thomson ave., short distance east of Queens County Courthouse to Borden ave., near Thirty-fourth st., East River Ferry. Lowest bidder for this work is Republic Construction Company, \$104,225. Lowest bidders on other jobs and amounts of their bids are as follows:

For repaving Corona ave., from Broadway to Strong's Causeway, through Corona section about two miles, a part of the distance with granite blocks and the remainder with wooden blocks. J. F. Hill, \$91,398.

For laying sidewalks and curbs in Third and Fourth sts., Woodside, from Woodside ave. to Riker ave. Garcey Construction Company, \$9,928.

For regulating and grading Franklin st., Astoria, from Boulevard to Halsey st.; curbing and laying crosswalks from Boulevard to Halsey st., and on the north side, from Halsey st. to Monson st. Peace Bros., \$2,921. Same to Sherman st., Long Island City, from Washington avenue to Paynter ave. Cooper & Evans Company, \$25,184. Same in Clinton ave., from Clermont ave. to Willow ave., Maspeth. Peace Bros., \$6,095. Same in Fairview ave., from Woodbine to Gates, Ridgewood. Charles A. Meyers, \$1,252. Same in Boulevard, Long Island City, from Paynter ave. to Webster. Cooper & Evans Company, \$26,422. Same north side of Bayview ave., from Forest ave. to the Strand. Rockaway Garcey Construction Company, \$1,728. Same in Marion st., Long Island City, from Paynter ave. to Washington ave. Cooper & Evans Company, \$31,818. Same in Elm avenue, from Fresh Pond road to Myrtle ave., Evergreen. Charles A. Meyers, \$1,879.

For paving with sheet asphalt on a concrete foundation Catalpa ave., Ridgewood, from Fresh Pond road to Myrtle ave., Uvalde Asphalt Company, \$19,720.

**Rochester, N. Y.**—By Board of Contract & Supply, for Bell Alley asphalt pavement, to Whitmore, Rauber & Cicinus for \$2,486.

**Rochester, N. Y.**—For improvement of East Side Boulevard, to Whitmore, Rauber & Vicinus, the bid being \$50,781. One other bid was received from Julius Friedrich Co.

**Elizabeth, N. J.**—For paving Clinton pl., 4,800 sq. yds., with brick to J. J. Poth, and for paving Grier ave. with brick to Edw. Payhran, 3,200 sq. yds. W. H. Luster is City Surveyor.

**Roselle Park, N. J.**—For improvement of Chestnut st., from plans of J. Wallace Huggins, Borough Engr., New York, to Bamberger & Chapman, of East

Orange, for Warrenite pavt. on broken stone base, 5-in. curb, at the following bid: 4,100 cu. yds. excav. in road, 50 cts.; 536 cu. yds. excav. outside road, 50 cts.; 50 cu. yds. foreign material for sub-grade, 50 cts.; 10,411 sq. yds. foundation, 6-in. (broken stone), 55 cts.; 3,500 sq. yds. 4-in. (broken stone), 55 cts.; 13,933 sq. yds. surface (Warrenite), 99 cts.; 462 lin. ft. header curb, 50 cts.; 19 cu. yds. retaining walls, concrete, \$10; 1,922 sq. yds. gutters, brick, \$2.50; 6,750 lin. ft. curb, 5 in., 78 cts.; total, \$33,999. Totals of other bids: (a) Dolarway, concrete base, 4-in. curb; (b) Warrenite, concrete base, 4-in. curb; (c) Amiesite, concrete base, 4-in. curb; (d) Warrenite, broken stone base, 4-in. curb; (e) Amiesite, broken stone base, 4-in. curb; Bamberger & Chapman, East Orange (a) \$31,517.05, (b) \$40,434.17, (c) \$31,351.95; Weldon Contr. Co., Rahway, N. J., (d) \$38,564.27, (e) \$36,056.33; C. H. Winans Co., Linden, N. J., (b) \$47,348.91; (c) \$43,587.00; (d) \$43,171.16; (e) \$39,409.25.

**Trenton, N. J.**—By City Comrs. for paving as follows, amounting in all to \$125,000: Wood st., Metropolitan block, C. A. Reid & Co. To the Newton Paving Co., as follows: N. Broad st., Bermudez asphalt; Davies st., Metropolitan block; Lator st., bituminous concrete; Hermitage ave., Swan plan of asphalt; Union st., Bermudez asphalt; Stuyvesant ave., bituminous concrete; Parkside ave., Swan plan of asphalt; bituminous concrete on Delawareview and Edgemere aves. and Hewitt, Tyler, Mott and Camden sts. Mott st., S. Clinton ave. to Hudson, Belgian block, McGovern Constr. Co.; Magowan st. and Horsehoe Lane, cement concrete, Antonio De Lucia.

**Columbus, O.**—To Andrews Asphalt Paving Co., Hamilton, O., for improving sundry streets for city of Columbus, at \$25,000.

**Lancaster, O.**—To Chas. F. Justus, N. Maple st., at \$5,177.04, for construction of Nelsonville brick pavement on Pearl st.

**Troy, O.**—By Board of Commissioners of Miami County to Biglar Bros., Middleton, O., at \$38,930, far grading and paving Sec. 3 of Piqua and Troy road.

**Columbus, O.**—To E. A. Patterson, 1448 Franklin av., at \$6,000, for construction of concrete and brick sidewalks; also macadam roadway at the Ohio State University, at \$3,500.

**Hamilton, O.**—By Board of Control for grading, graveling, curbing and guttering Kahn ave., in East Hamilton, to A. Wirtz Transfer Co., at their bid of \$10,422.50. Other bids were Garver Construction and Transfer Co., \$10,434.40; H. F. C. Koehler & Sons, \$11,079.28; John H. Hiatt, \$11,174.50.

**Youngstown, O.**—By City Council, for construction of vitrified brick pavements: Pennsylvania ave., A. Serafino, at \$8,300; Prospect st., James McCarrow, at \$7,900; Houghs & Olivet sts., Miller Bros., at \$7,000; Darrow st., Jos. Hammon, at \$4,000; Worthing, Federal and Jefferson sts., Fleming & Platt, at \$11,000; Portland st., Turner & Olson, at \$8,000, and Woodland st., Chas. Harris, at \$25,000. Frank Lilly, is City Engineer.

**Youngstown, O.**—By Board of Control, as follows: Grading Oneta st., R. C. Shook, \$2,324; grading Jones st., Joseph Morrison, \$3,212.74.

**Troy, O.**—To Biglar Bros., of Middletown, for building third section of State paved highway between Troy and Piqua at their bid of \$38,930. Distance to be paved is 21,900 feet, or 4.15 miles, and the width 16 feet.

**Bethel, Pa.**—To M. Bennet & Sons, of Indiana, Pa., by State Highway Department for construction of roads in Bethel township, Lebanon County, and for Pine Creek and Dunstable townships in Clinton County. Work on roads will be started at once.

**Erie, Pa.**—By council for pavement on Twenty-sixth st., from French to Parade st., to Mayer Bros., for asphalt at \$1.26½ per yard; artificial curbing at 32 cents a foot; catch basins at \$40; spills at \$5; 9-inch pipe at 75 cents and 6-inch pipe at 50 cents a foot. Bid on brick was \$1.40. McCormicks' bid \$1.28 on asphalt. J. & M. Doyle bid \$1.30.

Pavement on Fifth st., from Parade st. to East ave., to John McCormick & Son for Bermudas asphalt, at \$1.26; curbing, 32 cents; catch basins, \$38; spills, \$5; 9-inch pipe, 75 cents, and 6-inch pipe, 50 cents. Bessemer block was quoted at \$1.42. Mayor Bros.' bid was \$1.26½, and J. & M. Doyle's bid was \$1.30.

Pavement on Fourth st., from Parade st. to Ash st., to Mayer Bros.' Construction Co. for Trinidad asphalt, class B, at \$1.25; curbing, 32 cents; catch basins,



\$40; spills, \$5; 9-inch pipe, 75 cents; 6-inch pipe, 50 cents. Bessimer block bid was \$1.42. McCormick's bid on asphalt was \$1.26, and J. & M. Doyle's bid was \$1.30.

Curbing of Twenty-fifth st., from Parade st. to East ave., both sides where not already curbed, went to Louis Moski, at 32¢ cents a foot. Willis Bancroft offered to do the work for 60 cents.

On Himrod resolution for repaving Diamond alley, from Twelfth to Fourteenth st., Mayer Bros. Construction Co. bid 95 cents for Bermudas asphalt surface, and J. & M. Doyle wanted \$1.15. Mayer Co. got the job, amounting to about \$700.

**Harrisburg, Pa.**—By State Highway Department for paving, bids opened on July 30, as follows (successful contractors are indicated by star): Route No. 221, Blair County, Logan Township, 26, 624 ft. Fogle & Co., Hollidaysburg, Pa.; asphaltic-bituminous macadam (penetration method), \$98,517.60; asphaltic concrete on concrete foundation, \$110,008.15; Bennett & Randall, Greensburg, Pa., \$100,956.05; H. G. Hinkle, Inc., Altoona, Pa.; asphaltic-bituminous macadam (penetration method), \$111,240.30; asphaltic-concrete on concrete foundation, \$109,676.40\*. Route No. 246; Allegheny County, Marshall Township, 5,524 ft. asphaltic-bituminous macadam (penetration method). Neelen & Daly, Pittsburgh, Pa., \$39,681.04; Foley Contracting Co., Pittsburgh, Pa., \$38,146.92; Ridge Bros. Co., Pittsburgh, Pa., \$39,879.11. Route No. 85; Erie County, Conneaut Township, 8,077 ft. brick block paving. H. O. Putnam & E. W. Brown, Oil City, Pa., \$31,764.20; Heath & Hollis, Corry, Pa., \$34,518.41; Vetter Construction Co., Meadville, Pa., \$37,258.78; Elmer M. Love & Son, Corry, Pa., \$29,977.05; Niagara Construction Co., Buffalo, N. Y., \$31,260.10. Lebanon County, Bethel Township, 7,400 ft. Telford macadam. The Juniata Co., Philadelphia, Pa., \$28,844.58; M. Bennett & Sons, Indiana, Pa., \$22,908.07; Stucker Bros. Construction Co., Harrisburg, Pa., \$36,403.60. Erie County, Albion Borough, 5,833 ft. brick block paving. H. O. Putnam & E. W. Brown, Oil City, Pa., \$25,353.90; Heath & Hollis, Corry, Pa., \$30,008.22; Vetter Construction Co., Meadville, Pa., \$30,477.82; Elmer M. Love & Son, Corry, Pa., \$26,291.29; Niagara Construction Co., Buffalo, N. Y., \$26,227.00. Clinton County, Pine Creek Township, 10,996 ft., asphaltic-bituminous macadam (penetration method). Fiss & Christiano, Shamokin Dam, Pa., \$35,997.35; The Juniata Co., Philadelphia, Pa., \$33,451.69; W. C. Simpson, Punxsutawney, Pa., \$33,987.34; Wyoming Valley Construction Co., West Nanticoke, Pa., \$36,515.67; M. Bennett & Sons, Indiana, Pa., \$30,649.86\*. Clinton County, Dunnstable Township, 740 ft. asphaltic-bituminous macadam (penetration method). Fiss & Christiano, Shamokin Dam, Pa., \$2,531.65; Juniata Paving Co., Philadelphia, Pa., \$2,224.34; W. C. Simpson, Punxsutawney, Pa., \$2,392.11; M. Bennett & Sons, Indiana, Pa., \$2,113.88\*. Allegheny County, Versailles Township, 3,510 ft. brick block paving. Bowman Bros. Co., McKeesport, Pa., \$20,025.50; James Topley & Co., McKeesport, Pa., \$21,835.55; P. F. Rhoades & Son, Versailles, Pa., \$25,975.50; \*award to be made Monday August 5, 1912. Adams County, Straban Township, 12,104 ft. asphaltic-macadam. B. B. Gonder, Strasburg, Pa., \$44,052.29; George E. Stock Co., Gettysburg, Pa., \$38,265.44; Thos. Meehan & Sons, Mt. Airy, Pa., \$32,692.12\*. Allegheny County, Edgeworth Borough, 1,790 ft., to be re-advertised; Allegheny County, Sewickley Heights Township, 5,988 ft., to be re-advertised. L. F. Neefe, Chief Clerk.

**Roscoe, Pa.**—For paving of 8,000 feet of Railroad st. in the borough of Roscoe, to Frank Manella, of Pittsburg, for \$16,000.

**York, Pa.**—For paving of East Market st. with sheet asphalt between Sherman and Lehman sts., to Central Construction & Supply Co. of Harrisburg, at \$1.80 per sq. yd.

**Woonsocket, R. I.**—To Amos D. Bridges & Sons, Inc., of Hazardville, Conn., to build nine miles of bituminous State highway in towns of North Smithfield and Smithfield, by State Board of Public Roads. Bid for work was \$52,714.90. Other contracts awarded were as follows: Bristol, one mile, L. N. Callin, of Bristol, \$6,760.75. Burrillville, one mile, Amos D. Bridges & Sons, Inc., \$7,139.03. D. J. Shea submitted a bid of \$6,663.46 for the work, but an error in his figures of nearly \$1,000 brought the total higher than that of the Bridges concern. Cranston, one-half mile, Chas. Horne, Millbury, Mass., \$3,573.22. In each case two sets of figures were submitted, first being for waterbound macadam and other for bituminous construction. Other bids received were: North

Smithfield and Smithfield, nine miles, D. J. Shea, Central Falls, \$53,378.58, \$60,788.20; L. C. Carchia, Boston, Mass \$42,244.87, \$52,815.37; A Vito Construction Co., Thompson, Conn., \$46,322.60, \$57,596.40; T. J. Quinn, Ashton, \$54,249.90, \$62,706.30; Charles E. Horne, Millbury, \$44,275.20, \$58,288.50.

**Chattanooga, Tenn.**—For permanent improvement of East End ave., to West Construction Co. An asphalt-macadam pavement will be laid from McCallie ave. to Eleventh st., and later extended to Main st.

**Sherman, Tex.**—For construction of 78 miles of macadamized road in Sherman precinct by Commissioners' Court to Larkin Construction Co., of Denison. Contract price is \$255,019.40. Twelve miles of road will be built in city limits of Sherman.

**Salt Lake City, Utah.**—Contracts and bonds of G. A. Heman for paving extensions on Third West, West Temple and Ninth South sts. have been formally approved by City Commission.

**Culpeper, Va.**—Culpeper Construction Company's bid of \$25,494.34 being lowest in open competition to macadamize four and three-tenths miles of streets in town of Culpeper, contract was awarded to that company at joint meeting of Board of Supervisors.

This contract awards first section of work to macadamize streets and roads in this magisterial district, election having previously been held which authorized board to expend \$120,000 for this work.

**Spokane, Wash.**—Lowest bid for grading, building retaining walls and drains on Ninth ave. was received from Contractor C. M. Payne at \$3,900. Engineer's estimate was \$5,700. On grading, curbing, sidewalk and parking of E st., Seventh to Tenth ave., estimate \$2,455. Council received following proposals: C. M. Payne, \$2,425; Washington Contracting Company, \$2,435; Abbott & Joslin, \$2,700; J. B. Mitchell, \$2,747.

## SEWERAGE

**Colfax, Cal.**—Sewer bond issue of \$15,000 has been carried. Septic purification plant will be installed.

**Los Angeles, Cal.**—Plans and specifications for underpinning central intercepting sewer trestle which crosses Los Angeles River at Sixth st. have been approved by Board of Public Works. Work will cost \$960, it is estimated.

**San Jose, Cal.**—City Clerk has been directed to advertise for bids for construction of Section B of sewer system, which is in Polhemus tract.

**Augusta, Ga.**—Specifications for new city settling basin will be ready in few days, and bids will be advertised for. Work to be looked after this year will be placing of 150,000 yards of dirt. City will spend about \$25,000 on new basin.

**Muncie, Ind.**—Three estimates on proposed public improvements have been presented by City Engineer B. F. Dearhoff, for construction local sewer in Elm st., from first alley south of Ninth st. to center of Jefferson st. and Ohmer ave. in sum of \$1,455.60; for construction of local sewer in Eighth st., from east lot line of lot 73 in Winton Place addition to city of Muncie, in sum of \$1,778.51; for construction of local sewer in Eighth st., from lot 72 in Winton Place addition to city of Muncie to Hoyt ave., in sum of \$1,425.

**Bowling Green, Ky.**—City Council is said to be considering issue of \$300,000 bonds for construction of sewer system.

**Saco, Me.**—Civil Engineer R. W. Libby of Saco is at work on plans of new sewerage system, which will be built by city and which is to start from river at White's wharf.

**Ahmeek, Mich.**—At special meeting of Ahmeek Village Council it was decided to lay 1,000 feet of sewer mains. Plans for construction of drain have been drawn up by Village Engineer Ralph Abramson. Bids will be advertised for at once.

**Ely, Minn.**—Council is said to have decided to extend sewer on Sheridan st., at probable cost of \$12,000.

**Perth Amboy, N. J.**—Ordinance has been passed to lay 15-inch pipe sewer in West Side ave., from Hall ave. to Neville st., and 18-in. pipe sewer through Jeffries st., to connect with Penn st. sewer.

**Princeton, N. J.**—At last meeting of Borough Council Borough Engineer reported that State Board of Health had approved specifications for two new filter beds at northeast disposal field, and it was decided to begin work on these beds immediately. Single bid received for work, \$1,590, being considered too high, work will be done under supervision of Sewer Committee of Council.

**Westfield, N. J.**—Bids ranging from \$15,000 to \$20,000 have been received by Town Council for enlargement of sewer work.

**Albion, N. Y.**—Proposition to build sewer system and disposal plant in this village has been carried at special election, 150 voting in favor and 40 against. Plans for system have already been made and provide for sewer on all important streets. Minimum cost of new system is to be \$150,000 and maximum \$170,000.

**Akron, N. Y.**—Map is being made by surveyors for sewer system for village. Appropriation of \$850 was recently made for purpose of securing map and plans of system with disposal plant and estimated cost of same.

**Irondequoit, N. Y.**—Consulting Engineer Emil Kuichling, of New York City, is preparing plans for construction of sewage disposal plant in Irondequoit.

**Mt. Kisco, N. Y.**—It is understood that there is to be special election to ascertain if taxpayers wish to appropriate money to repair sewer system in Mt. Kisco.

**Syracuse, N. Y.**—Council has authorized issue of \$200,000 bonds for completion of intercepting sewer.

**Syracuse, N. Y.**—A 15-in. pipe sewer is to be laid in Wyman ave. at cost of \$2,250.

**Salem, O.**—Bids will be readvertised for construction of sewer on Wilson st.

**Eddystone, Pa.**—Ordinance has been adopted for construction of sewer on Essington ave.

**Morgantown, Pa.**—City Solicitor is preparing ordinance for bond issue for sewerage and paving.

**Sharpsville, Pa.**—Construction of sewage disposal plant is being discussed; estimated cost \$30,000 to \$40,000.

**Sharon, Pa.**—Resolution favoring construction of inter-borough sewage disposal plant is being considered.

**Nashville, Tenn.**—Bill has been adopted appropriating \$3,000 for construction of sewer in alley No. 152, and \$4,500 for sewer in Twenty-seventh and Twenty-ninth aves.

**Clarksville, Tex.**—Clarksville City Council has employed Nagle & Peterson, civil engineers, of Muskogee, Okla., to supervise construction of sewerage system, work on which will be started at once. Surveys of city will be made and system will be installed as rapidly as possible.

**Austin, Tex.**—Sewer bonds in sum of \$100,000 will be sold at once.

## CONTRACTS AWARDED.

**Russellville, Ark.**—By Comrs. Sewer Dist. No. 1 for constructing sewer system from plans of E. A. Kingsley, Markham and Center sts., Little Rock, to Tonkawa Constr. Co., of Kansas City, Mo., for about \$23,000. Following are totals of other bids received for proposed sewer system: J. S. Terry Constr. Co., Poteau, Okla., \$23,090; O'Neil Eng. Co., Dallas, Tex., \$23,724; Pouncey Paving Co., Memphis, Tenn., \$25,751; Little Rock Paving Co., Little Rock, \$24,507; Miller Eng. Co., Little Rock, \$22,569; Dalton & Campbell, Dallas, Tex., \$24,827; C. R. Nichols Constr. Co., Caney, Kan., \$23,899.

**San Francisco, Cal.**—By Board for constructing sewer in Steuart st. from Howard to Folsom, to Williams & Finnegan for \$10,439.

**Aurora, Ill.**—By Board of Local Improvements for construction of system of storm and sanitary sewers as follows: Rosewood ave., Vito Graziano & Lahatore Fantino, Chicago, \$2,897; Forest ave. and other streets, Frank E. Kaminski, Watertown, Wis., \$9,994.05.

**Greenfield, Ill.**—By Drainage Commissioner of Hancock County, to Summitville Drain Tile Co., Summitville, Ind., at \$5,993, for construction of tile drain.

**Moline, Ill.**—By Board of Local Improvements to Moline Heating & Construction Co., at \$31,939.40, for construction of sewer and water mains in Twenty-seventh st. Also awarded contract to McCarthy Improvement Co., Davenport, Ia., at \$13,475.05, for constructing sewer in Dist. No. 27.

**Michawaka, Ind.**—To G. F. Stockinger, for construction of lateral sewer on West Marion st.

**Galva, Ia.**—To H. Cathroe Company, of Omaha, Neb., for construction of sanitary sewer system for about \$6,515.

**Iowa Falls, Ia.**—For constructing sanitary sewer, to Guy E. Smith, of Indianola, Ia., for \$8,486.

**Baltimore, Md.**—Lowest bid on sanitary contract No. 95, Section No. 6, High Level Interceptor, was received from Ryan & Reilly at \$113,133.50. Other bids as follows: C. B. Clark & Co., \$114,939.25, and Wm. McCarthy & Co. at \$130,116.75. Thomas D. Pitts, Acting Chief Engineer.

**Fairhaven, Mass.**—For new sewer building in Fairhaven by Sewer Commission to Brigham and Mogadero of Boston, who bid \$6,400. Contract was made at this price with understanding that rock excavation should be at rate of \$4 a cu. yd. extra. Work consists of one new outlet in north end of town near Coggeshall st. bridge and extension of another pipe in this section. Another outlet will be built in south-east part of town.

**Eveleth, Minn.**—By city, for laying sewer on Payal and Roosevelt aves. and water main on Roosevelt ave. to east end of Fourth Ward, to Pastoret-Lawrence Company for \$9,606.38.

**Haddon, N. J.**—Lowest bid received for construction of sewers was that of Garden State Construction Co., Camden, N. J., at \$14,880. Itemized bid as follows: 18,035 ft. 6-in. Sole tile at 30c. per lin. ft.; 8,760 ft. 8-in. Sole tile at 33c. per lin. ft.; 50 ft. 10-in. Sole tile at 54c. per lin. ft.; 1,240 ft. 12-in. Sole tile at 62c. per lin. ft.; 920 ft. 18-in. terra cotta pipe at \$1.21 per lin. ft.; 800 ft. 36-in. terra cotta pipe at \$4.22 per lin. ft.; 5 manholes at \$49 each. Other bids were as follows: Augustus Slutzer, Collingswood, N. J., \$14,998.32; W. Penn Corson, Camden, N. J., \$17,109.80; B. F. Sweeten & Son, Camden, \$17,298.85; Kelley & McFeeley, Camden, \$22,171.90; R. Griffith, Township Clerk, Westmont, N. J.

**Brooklyn, N. Y.**—Six contracts have been awarded for new sewers in Queens aggregating \$50,610.43. Contracts and successful bidders are as follows, with amount of bid: Dutch Kills pl. and Queens pl., Long Island City, from Meadow st. to Nott ave.; Manley and Mount sts. from Johnson ave. to Nott. Evergreen Construction Co., \$5,326.90. Bleecker st. from Seneca ave. to Fairview and Fairview from Bleecker to Greene. Clancy & Van Alst, \$7,298.80. Seneca ave. from Puritan to Cornelia. Clancy & Van Alst, \$560.03. Creek st. from Nott ave. to Hunter's Point ave.; Nott, Pearson and Anable aves. from Meadow to Church sts.; Davis st. from Pearson to Hunter's Point ave. Storm water main in Hunter's Point ave. from Hayward st. to Dutch Kills Canal and dry weather sewer in Hunter's Point ave. from Dutch Kills Canal to Creek st. Degnon Realty Co., \$25,105.30. Putnam ave. from Seneca to Forest, Ridgewood. Clancy & Van Alst, \$7,912.02. Ely ave. from Harris to Crown, 285 ft. south of Wilbur ave. Greene Construction Co., \$4,407.38.

**Oneida, N. Y.**—By Board of Public Works, for construction of sanitary sewer in East Railroad st. to Carnevala Brothers at \$659.50.

**Hudson, N. Y.**—By Council to Patterson and Malone, for 30-in. tile sewer at \$2,515 per foot; \$20 for catch basins; \$10.27 for T branch. Other bidder was John F. Hester.

**Utica, N. Y.**—By Board of Contract & Supply, to Martin McManus for \$438.70; sewer in Caroline st., to F. M. Johnston for \$99; sewer in Pleasant st., to A. W. Fitch for \$331.20; sewer in Lansing st. to Martin McManus for \$677.20; sewer in Kellogg ave. to Martin McManus for \$1,844.20.

**Monroe, N. C.**—For constructing sanitary sewer system, to G. Jaeger, of Rich Hill, Mo., for \$24,000. City will take over present sewer system.

**Centerburg, O.**—By City Council to National Co., South Bend, Ind., for construction of sewers and disposal plant.

**Chillicothe, O.**—By Director of Public Service for construction of sewers as follows: Eighth, Ninth and Mulberry sts. storm water sewers, Jardine, Brewer & Tomlinson, 1,928.22; Eighth and Paint sts. and alley sanitary sewers, J. F. Perry, \$1,788.13.

**East Youngstown, O.**—By Town Council, for construction of sewer in Wilson ave. from McVey's Run to westerly village limits, to P. & P. F. Grady for \$13,174.

**West Brownsville, Pa.**—By Town Council to Craft & Gans, Uniontown, Pa. for construction of sanitary sewers in Railroad and Middleton sts.

**Wilkesburg, Pa.**—For construction of sewers as follows: Superior and Mulberry sts., Savage & Hughes; Wesley st., D. J. Madigard & Co.; Lulu st., Ott Bros. Co.

**Erie, Pa.**—By Council for Sewer Contracts as follows: Nine-inch sewer for Reed st. and 24-inch pipe for Hill rd. to Joseph McCormick & Bro. Only competing bids being from Clements Wolfram. The 9-inch pipe will cost 85 cts. a foot and the 24-in. pipe, \$1.90 a foot. Contractor Edward Driscoll received job of laying a 9-inch sewer in Third st. from Wallace st., eastwardly 470 ft., at

\$1.25 a foot. His only competitor, Clement Wolfram, bid \$1.50. The 6-inch pipe comes at 50 cts.; Y or T branches at \$1.35, and manholes at \$50.

**Erie, Pa.**—By Council to Joseph McCormick & Bros. for construction of eastern Sixth ward drainage sewer system: Sewer comprises 24-inch, 12-inch and 9-inch mains in Nineteenth and connecting streets from Chestnut st. to Mill Creek valley. Total of bid reaches about \$8,000. This was said to be \$1,900 above estimate of city engineer and \$3,000 above lowest price of another contractor. For 24-inch pipe, McCormicks asked \$2.98 and F. J. Eichenlaub wanted \$2.78. The 12-inch pipe was quoted at \$1.25; 9-inch at \$1; 6-inch at 60 cts.; and manholes at \$40.

**New Kensington, Pa.**—For constructing brick storm sewer on Ninth st., to William Jones, of Carnegie.

**Greenville, S. C.**—For laying of over 18,000 additional feet of sanitary sewerage, to Porter & Boyd of Charlotte.

**Greenville, S. C.**—Paving and Sewer Commission, for constructing intercepting sewer and extending sanitary sewer system, to Porter & Boyd, of Charlotte, N. C., for \$15,433.

**Corpus Christi, Tex.**—By Commissioners to Sherman Concrete Company, city, for building storm sewers at \$22,356.

**Ogden, Utah.**—By City Commission to build sewer in District No. 113 to J. P. O'Neil Construction Co. at \$4,600.

## WATER SUPPLY

**Greenville, Col.**—Arrangements have been made to put through 5-inch pipe extension down Seneca st. from Northern Corner to Firmstone Corner. Big main will give fire pressure to those in lower Seneca st. district.

**Los Angeles, Cal.**—A plan tending to change present system of extension of water systems within city limits is being considered.

**Washington, D. C.**—Installation of meters is recommended.

**Augusta, Ga.**—About \$100,000 will probably be expended on waterworks extension. J. H. Ferguson is superintendent.

**La Grange, Ga.**—Bond election will probably be held in September. New municipal waterworks system and gas plant for LaGrange are provided for in bond measures.

**Macon, Ga.**—Bids will be received by Board of Water Commissioners until noon, Aug. 24, for purchase of \$40,000 worth of waterworks bonds. W. H. Petner, Chairman.

**Moline, Ill.**—Citizens voted on July 23 in favor of \$164,000 bond issue for water works improvement, which will include the following: Five hundred thousand gallon elevated tank; new boiler plant; 150-ft. concrete stack; new intake well; addition to filtration plant, including sedimentation basin and clear well; new chemical tanks and feed apparatus; addition to distribution system and increase in number of valves. Dabney Maury, Consulting Engineer, Monadnock Bldg., Chicago.

**Elgin, Ill.**—Western Construction & Engineering Co., of Fort Wayne, is lowest bidder on job of drilling big artesian well here, which is estimated to cost \$5,000.

**Hickley, Ill.**—Citizens will shortly vote on \$8,000 bond issue for installation of waterworks system.

**Ottawa, Ill.**—Bids have been opened for extension of certain water mains in East Ottawa and on north side. J. M. Dougherty bid \$1,855.60 for all work. W. E. Berndt bid \$1,875. J. W. Clegg bid \$2,000. All of these bids are much higher than estimates prepared by city engineer.

**Palmyra, Ind.**—Bonds will shortly be issued for extension and improvement of waterworks system.

**Sullivan, Ind.**—City Council has passed resolution providing for transfer of old water works system to Sullivan Water Company, a new corporation composed of Vincennes capitalists. E. M. Kerlin of Vincennes, as trustee of company, has made preliminary arrangements for drilling wells, laying mains, and installation of new pumping works. New company has franchise of twenty-five years.

**Centerville, Iowa.**—Hall & Adams, engineers, have completed plans for reservoir for water works and bids will shortly be called for. Dam 330 ft. high will be rebuilt.

**Coon Rapids, Iowa.**—City will vote Aug. 13 on \$2,700 bonds for water extensions.

**Ireton, Iowa.**—Petition is being circulated asking for special election to vote

bonds for sinking well and making other improvements for better fire protection.

**Haven, Kans.**—Installation of waterworks is contemplated.

**Bloom, Miss.**—At meeting of water works committee of the Council it was decided to recommend purchase of artesian well of Gulfport and Mississippi Coast Traction Company at Lameuse and Railroad sts. for \$1,000 to furnish water for city reservoir.

**Kalamazoo, Mich.**—Proposition to bond city for \$40,000 for water extension has been carried at special election.

**St. Joseph, Mo.**—Installation of water purification plant is under consideration.

**Jersey City, N. J.**—Street and Water Board has adopted resolution calling upon County of Essex and State Road Department to take steps at once to repair damage done Jersey City pipe line water gate at Lindsay crossing, Cedar Grove, Essex County, by builders of county road.

**Westfield, N. J.**—Council has requested water company to lay mains in Lincoln ave. and Grove st. in accordance with terms of water contract.

**Ballston Spa, N. Y.**—Board of Trustees of Ballston Spa have adopted resolution to place before taxpayers proposition to meter village.

**Catskill, N. Y.**—Installation of new water supply is being considered.

**Carthage, N. Y.**—Carthage Water Board is to install 600 ft. of water pipe in upper State st. in near future. Pipe is to be laid so that all arrangements for water service will be completed before State st. is paved this fall.

**Rochester, N. Y.**—State Conservation Commission has plans for providing water supply for cities and villages along route of Erie Canal between Buffalo and Rochester.

**Enderlin, N. D.**—Council is considering installation of water works and sewer system to cost \$45,000.

**Durham, N. C.**—Question of making new contract with Durham Water Company is being considered.

**Omaha, Neb.**—Water mains will be constructed in 27th ave.

**Omaha, Neb.**—City will negotiate privately for several thousand water meters.

**Dayton, O.**—Nine hundred thousand dollars will be devoted to extension of water works.

**Defiance, O.**—Ordinance has been passed upon suspension of rules directing receiver of Defiance Water Company to make water main extensions on Washington, Wayne, Davidson and Kenter sts., and in all to install seven additional fire hydrants.

**Cincinnati, O.**—Mayor Hunt has sent to Council communication and ordinance to authorize expenditure of \$10,000 for survey of proposed high pressure water main service. Water Works Superintendent Baldwin recently completed estimate for installation of such system in business and factory district of city.

**Hood River, Ore.**—Water works bonds in sum of \$36,000 have been awarded to Carsten & Earles, Inc., of Seattle.

**Mt. Alto, Pa.**—Bids for construction of two steel water tanks, one near Mont Alto, Franklin County, and other near Cresson, Cambria County, have been requested by Commonwealth of Pennsylvania Department of Health.

**Philadelphia, Pa.**—Ordinance has been passed to authorize laying of water pipe in Bambrey, Brooklyn, Cayuga, Coulter, Eighth, Ella, Henry, Kerbaugh, Sixth, Seventh, Solly, Stillman, Vaux and Wingohocking streets, Cemetery avenue and Warden drive.

**Chamberlain, S. D.**—An \$18,000 bond issue has been voted for installation of water works system. Water will be pumped from Missouri River.

**Austin, Tex.**—Waterworks improvement bonds in sum of \$400,000 will be sold at once.

**Waco, Tex.**—Erection of filtration plant has been authorized.

**Richmond, Va.**—Committee has recommended apportionment of \$10,600 from bond issue for water mains in annexed territory to be used for laying 12-inch water main from Chimborazo Park along Government road to Fulton Hill.

**Hillyard, Wash.**—City Engineer of Hillyard has estimated cost of new cast-iron pipes for water mains at \$137,000. Massmeeting of citizens has been called at which advisability of laying mains will be discussed.

**Morgantown, W. Va.**—Mayor Flenniken has appointed Councilmen Chrisman, Albright and Barrickman a committee to investigate feasibility of city owning its water works.



**Fond du Lac, Wis.**—Council has approved of ordinance providing for \$25,000 bond issue for water works improvements.

**Oshkosh, Wis.**—Question of acquiring municipal ownership of plant of Oshkosh Water Works Company is now up to people of Oshkosh. City Council has adopted resolution providing that question of city acquiring water works property shall be submitted to vote of electors at special election to be held on November 5, date of regular general election.

#### CONTRACTS AWARDED.

**Lodi, Cal.**—By City Trustees to J. F. Jensen to sink one of wells at municipal water works down to another strata of water.

**Ontario, Cal.**—To Simmons & Simmons, of Ontario, for construction of reinforced-concrete reservoir, of 1,000,000 gal. capacity on Emil Firth ranch, in Perris Valley, to be equipped with pipe lines and pumping plant.

**Moline, Ill.**—For laying water mains in Twenty-seventh st. water main dist., to Moline Htg. & Constr. Co., of Moline, for \$18,462. L. Payton is City Engineer.

**Cedar Rapids, Ia.**—For filters and other equipment at water works station, to Jewel Filter & Equipment Co., of Chicago, Ill., for \$21,000.

**Mt. Sterling, Ky.**—By Mt. Sterling Water, Light and Ice Company for new filter plant to Roberts Filtering Co. of Pennsylvania. Plant will be modern and of latest improvements, and will be completed by November 1.

**Haverhill, Mass.**—To J. E. Parker & Co., of Boston, for constructing a 3,000,000 gal. reservoir from plans of Lewis D. Thorpe, of Boston, for \$19,086.

**Grand Rapids, Mich.**—Bids on 10 sewer, water main and street improvement jobs have been opened by Board of Public Works. All bids were ordered tabulated, with the exception of those on Fulton st. water main job, which was let to D. W. Boyes, low bidder, at \$1,292.82.

**Brockport, N. Y.**—To Witmer & Brown consulting engineers of Buffalo, for new water system for Brockport. Plan calls for expenditure of \$275,000, and it is expected that four months will see completion of work.

**Beach, N. D.**—By City Council for installing of waterworks in this city, contract for digging ditches, laying pipes and installing hydrants was let to Haggart Construction Co. of Fargo, they being lowest bidders. Their bid was as follows: For installing the hydrants, \$57 each; for laying the 8-inch pipe, \$1.58 per lin. ft.; laying the 6-inch pipe, \$1.37 per lin. ft. Minneapolis Steel Machine Co. were successful bidders for erection of 125,000 gallon steel tank upon a 100-foot steel tower, their bid being \$179.89.

**Carthage, N. C.**—To Newport Constructing & Engineering Co., Newport News, Va., for construction of system of water works.

**Bryan, O.**—By Board of Trustees of Public Affairs to Kelly Construction Co., at \$3,425, for construction of addition to municipal water and light plant.

**Sandusky, O.**—For construction of filter plant, to Geo. W. Doerzbach & Bro., of Sandusky, and they have sublet filter equipment to New York Continental Jewell Filtration Co., of New York, N. Y. Bid of Geo. W. Doerzbach & Bros., as submitted is as follows: Labor only, \$47,030; material only, \$47,030; labor and material, \$94,060; general contract, \$74,731, and filter equipment, \$19,300.

**Exeter, R. I.**—By State Board of Contract and Supply, Providence, to M. A. Gamino, at \$5,588, for extension of water system and construction of sewer and filter beds for sewage disposal at School for Feeble Minded, at Exeter.

**Ethan, S. D.**—To W. L. Bruce, Yankton, for construction of system of water works.

**Dallas, Tex.**—New York Continental Jewell Filtration Co. was low bidder at \$261,828 for filtration plant. Other bidder was Fred A. Jones Co., Dallas, at \$266,333. Engineer Puertes estimate was \$145,000. Bids have been rejected and new proposals under modified specifications called for.

**West Allis, Wis.**—By Board of Public Works to Herman Hohensee for laying 15,000 ft. of 6-in. water pipes.

#### LIGHTING AND POWER

**Ashdown, Ark.**—Plans are being prepared for construction of electric light plant at Ashdown.

**Denver, Colo.**—It is said that the Citizens' Gas & Electric Company will short-

ly apply for franchise for supplying gas.

**Los Angeles, Cal.**—Public Service Commission and the Los Angeles Gas and Electric Corporation have been ordered by City Council to lay gas main in East First st. from Evergreen ave. to eastern city limits, before thoroughfare is improved.

**La Grange, Ga.**—Bond election will probably be held in September. Gas plant and new water works system are provided for in bond measures.

**Swainsboro, Ga.**—Definite arrangements have been made for complete installment of new electric light plant for Swainsboro, as result of issue of \$7,500 worth of bonds, made by city sometime ago.

**Springfield, Ill.**—Twelfth st. lighting question is being discussed.

**Mishawaka, Ind.**—Incandescent lights have been ordered by Board of Public Works in alleys between Second and Third sts. and Church and Mill sts.

**Topeka, Kan.**—Plan to spend \$400,000 on installation of machinery at city electric light plant to furnish current for commercial purposes has been launched with Board of Commissioners.

**Haverhill, Mass.**—Installation of decorative street lights is being considered.

**Fredericktown, Mo.**—Citizens will shortly vote on proposition to issue bonds to amount of \$35,000 for construction of municipal electric light plant.

**Palmyra, Mo.**—Construction of municipal electric light plant is being considered. Estimated cost, \$6,000.

**Stewartsville, Mo.**—Franchise has been granted to John Keesman to construct and operate electric-light system and plant.

**Camden, N. J.**—Runyon & Carey, engineers, have been commissioned to prepare plans for municipal lighting plants.

**Albany, N. Y.**—Public Service Commission, Second District, has received petition from Colliers Light, Heat & Power Company asking permission to purchase franchises and property of Richfield Springs Electric Light & Power Company and Clinton Mills Power Company.

**Binghamton, N. Y.**—Announcement has been made of plans for gigantic hydro-electric plant, which is to impound two rivers at Whitney Point, in this county, converting 2,500 acres of land into lake ten miles long at cost of \$3,000,000 to furnish electrical power for trolley line between Utica and Binghamton, and also to supply electricity for commercial purposes to intermediate places. Enterprise is backed by New York capital.

**Bagdad, O.**—Bagdad has opened bids for installing electric lighting plant, and army post is considering telephone system for whole city.

**Bradford, Pa.**—City Council has taken initial steps toward acquiring municipal lighting plant. Committee of three is to investigate feasibility of establishing such plant and learn probable cost of inside and outside equipment.

**Seranton, Pa.**—Ordinance has been passed providing for additional electric lights on streets, avenues, courts and places in city. Ellsworth Kelly is City Clerk.

**Providence, R. I.**—Right to buy poles, lamps, wires, ducts and other equipment is given to the city under the recent agreement with the Narragansett Electric Lighting Co.

**Greenville, S. C.**—J. P. Wood has applied to city for franchise to distribute electric current, presumably in behalf of the Georgia-Carolina Power Co.

**Greenville, Tenn.**—Tennessee Eastern Electric company, which will shortly commence erection of power dam on Nolachucky River, near Greenville, has purchased electric lighting plant at Jonesboro and will, when their plant is completed, furnish electricity for Greenville, Jonesboro and Johnson City for lighting purposes.

#### CONTRACTS AWARDED.

**Los Angeles, Cal.**—To Shaw Electrical Crane Company of Muskegon, Mich., for furnishing 50-ton traveling crane for San Francisco power house. The price is \$5,888, f. o. b. Muskegon.

**Redlands, Cal.**—Contracts have been awarded to Arthur S. Bent Co., of Los Angeles, for construction of new electric power plant furnishing 1,000 H. P. in Mill Creek Canyon. C. H. Baldwin Estate, through Prof. C. G. Baldwin, is contracting for construction of new system.

**Elwood, Neb.**—For construction of municipal electric light plant to Alamo Engine & Supply Co., of Omaha, for \$6,033.

**Albany, N. Y.**—Lowest bid received by State Superintendent of Public Works for power plants to be built at Three Rivers, and equipped to provide for complete electric installation of four of the locks, was that of Lupfer & Remick, of Buffalo, at \$64,840.

**Rochester, N. Y.**—By Building Commission, for construction of new power house at Iola Sanitarium, to Towe & Defendorf, low bid being \$24,331. Estimated cost of structure was \$25,000.

**Seneca Falls, N. Y.**—For ornamental lighting in State st. from Fall st. to New York Central Railroad tracks, has been awarded by Municipal Board to Central New York Gas and Electric Co.

**Johnstown, Pa.**—For heating plant for State tuberculosis sanatorium at Summit, to Everetts & Oberdear Company, of Lancaster, on bid of \$85,894.

#### FIRE EQUIPMENT

**Berkeley, Cal.**—Fire Department urges purchase of more fire fighting apparatus.

**Los Angeles, Cal.**—Two Gorham motor-combination engine and hose wagons, to cost \$19,250, have been ordered for Fire Department by City Council. Engines will have capacity of 1,100 gallons per minute, and are six-cylinder, 135-horsepower motors.

**Portola, Cal.**—Equipment to fight fires will be secured by Portola immediately. It will include hydrants, hose and hose cart.

**Orville, Col.**—Bids have been asked by city for motor fire engine and hose wagon.

**Fairbury, Ill.**—About 500 ft. of hose will shortly be purchased.

**La Fayette, Ind.**—Purchase of motor truck will shortly be considered.

**Des Moines, Ia.**—Purchase of motor fire engine is under consideration.

**New Orleans, La.**—City Architect Christy is preparing plans for new Central Fire Station, which is to be erected in Decatur st., between Blenville and Conti sts.

**Hyattsville, Md.**—Arrangements have been made to borrow money for a municipal and fire department building.

**Winona, Minn.**—City Council has determined upon installation of first piece of motor-driven fire apparatus in this city. It is announced that in case combination chemical and hose truck proves satisfactory, entire local equipment will be replaced by motors.

**Great Falls, Mont.**—Purchase of 1,000 ft. of hose has been authorized.

**St Joseph, Mo.**—Petitions are being circulated in Brookdale asking Board of Public Works to build and equip fire station in that section of city. Petitions are being liberally signed and will be ready for presentation to board within few days.

**Bayonne, N. J.**—Contracts are now pending for acquirement of automobile fire engine and combination automobile chemical and hook and ladder apparatus.

**Jersey City, N. J.**—Board has passed resolution to request Board of Finance to appropriate \$6,000 for extensive repairs required in house of Truck No. 1.

**Trenton, N. J.**—Bids will be received at City Treasurer's office until 2 o'clock p. m. August 12, 1912, for purchase of whole of \$32,000 and \$20,000 Fire Department bonds of City of Trenton.

**Brooklyn, N. Y.**—Brooklyn is planning to have fifteen new fire engine houses and new fire alarm system before the first of the year.

**Lackawanna, N. Y.**—Purchase of motor fire truck is under consideration.

**White Plains, N. Y.**—Proposition to appropriate \$15,000 for purpose of constructing new fire house for Hope Engine Company may be voted on at coming village election.

**Akron, O.**—Purchase of eight motor fire trucks is recommended.

**Springfield, O.**—Bond issue of \$6,000 is being considered to cover cost of two auto hose wagons for Fire Department.

**Niles, O.**—Plans will shortly be prepared for new fire department building to be located at rear of city building.

**Shippington, Ore.**—Purchase of hose wagon and 500 ft. of hose has been authorized.

**Lebanon, Pa.**—Finance Committee has approved of bill for purchasing fire hose for volunteer fire companies.

**New Sharon, Pa.**—Purchase of chemical engine is being considered.

**Seranton, Pa.**—Plans are being prepared by Architect Frank J. Miller for hose house to be erected at North Rebecca ave. and West Gibson st., in Twenty-first Ward, and within few weeks local contractors will be asked to submit bids on building.

## TOO LATE FOR CLASSIFICATION

## BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>STREET IMPROVEMENTS.</b>				
Wisconsin	Superior	Aug. 12, 1 p.m.	Constrn. sidewalks and alleys	Board Public Works.
New Jersey	Newark	Aug. 12, 11.30 a.m.	Laying cement sidewalks	J. F. Connelly, City Clerk.
Pennsylvania	Darby	Aug. 12, 8 p.m.	Imp. roadways with macadam	J. V. Meckert, Chrmn. Com.
New York	Mamaroneck	Aug. 13, 8.30 p.m.	Constrn. pavements	Village Clerk.
New York	Brooklyn	Aug. 14, 11 a.m.	Constrn. asph. & furn. 100,000 gals. rd. oil	A. E. Steers, Boro. Pres.
New York	New York	Aug. 14, noon	Constrn. granite pavement	C. Tompkins, Comr. Docks.
New York	North Tarrytown	Aug. 15	Paving Cortlandt street	Village Clerk.
<b>SEWERAGE.</b>				
New York	St. George	Aug. 13, noon	Constrn. concrete and pipe sewers	Geo. Cromwell, Boro. Pres.
New York	Brooklyn	Aug. 14, 11 a.m.	Constrn. brick and pipe sewers	A. E. Steers, Boro. Pres.
Iowa	Oskaloosa	Aug. 15, 8 p.m.	Constrn. 2,000 ft. pipe sewers	S. V. Reynolds, Mayor.
Ohio	Salem	Aug. 17, noon	Constrn. sanitary sewer	D. H. Rummel, Dir. Pub. Ser.
<b>WATER SUPPLY.</b>				
Michigan	Royal Oak	Aug. 10	Furn. material for water works	H. B. Brace, Village Clerk.
Canada	Montreal	Aug. 14	Furn. 12,000,000 gal. pump & 2 small pmps.	L. N. Senecal, Sec. Comrs.
Pennsylvania	Ardmore	Aug. 14	Furn. centrifugal pumps	Commissioner.
Canada	Dorval	Aug. 15	Constrn. water works & sewerage system	W. A. C. Williams, Mayor.

## STREET IMPROVEMENTS

**San Francisco, Cal.**—Board has taken steps to have Geary st. paved anew from Kearny st. to Fifth ave., and as City Engineer estimated that this work would cost \$90,000, Board requested Supervisors to set aside that sum.

**Santa Monica, Cal.**—Ordinances of intention to pave many miles of streets have been adopted and specifications for work approved. Proposed work covers more than three miles of oil-gravel paving on Fremont, same on Oregon, and improvement of Eighth, Ninth, Nineteenth, California, Washington, Idaho, Montana, Central, Bontty, Lincoln, Garfield, Fourteenth and Fifteenth.

**Jacksonville, Fla.**—Ordinance has passed authorizing construction of sidewalks on large number of streets. W. S. Jordan is Mayor.

**Washington, Ill.**—Bids will be received by John Watson, City Clerk, until five o'clock p. m., Aug. 15, 1912, for all or any part of \$10,000, City of Washington st. bridge and sidewalk.

**Malden, Mass.**—Orders providing for oiling or watering of Pine st., from boulevard to Taylor st., and Spruce st., from Salem st. to Webster st., have been adopted.

**Taunton, Mass.**—Committee on Streets and Bridges has voted that next piece of work under \$35,000 permanent improvement appropriation, to be taken up should be that on County and Hart sts. and Middleboro ave.

**Bay City, Mich.**—Bids for permanent pavements on Marquette ave. from Patterson to Roy, and on Farragut from Center to Sixth, have been rejected by Board of Public Works, and it is probable that neither section will be paved until next season.

**Nashua, Minn.**—Improvement of roads is being considered.

**St. Paul, Minn.**—Proposed paving of Summit ave., from Dale st. to Lexington parkway, has met with approval of Board of Public Works and favorable report has been returned. Improvement, according to engineer's estimate, will run from \$97,000 to \$115,000, difference being in material used. Higher estimate covers creosote blocks and lower one asphalt.

**Lockport, N. Y.**—Bonds amounting to \$21,800 have been awarded to Douglass Fenwick & Co., of New York City, for improvement of West ave.

**Mamaroneck, N. Y.**—Paving of Railroad ave. has been authorized.

**Poughkeepsie, N. Y.**—Board of Public Works has determined to pave Smith st. from Winnikee ave. to Cottage st. with vitrified brick. R. J. Shields, Clerk.

**Rome, N. Y.**—At special meeting of Board of Public Works City Engineer Plunkett presented plans and specifications for improvement of Kossuth, Huntington, Elm and Steuben sts., and they were approved and ordered sent to Common Council.

**White Plains, N. Y.**—Board of Supervisors has authorized expenditure of \$30,000 for improvement of five roads. Bids will shortly be called for.

**Sebring, O.**—Bids will be received until 1 p. m., Aug. 20, at office of Village Clerk, for purchase of \$11,500 Fifteenth st. paving bonds. Harry Jenkins, Clerk.

**Youngstown, O.**—Bids will be received until 2 p. m., Aug. 19, at office of D. J. Jones, City Auditor, for purchase of following bonds: \$300 Clifton st. improvement bonds; \$4,315 Steel st. grading bonds; \$2,260 Midland ave. grading bonds; \$1,655 Richland ave. grading bonds; \$3,055 Marshall st. grading and sewer bonds; \$11,510 Salt Spring st. paving bonds, and \$8,115 Charlotte ave. paving bonds.

**Reading, Pa.**—Ordinance has been passed authorizing paving east side of Front street, from Schuykill ave. and Front st. to Walnut st.

**Reading, Pa.**—Resolutions have been adopted for various street improvements.

**Salt Lake City, Utah.**—Numerous city streets will be improved.

## CONTRACTS AWARDED.

**Baltimore, Md.**—By Board of Awards for paving contract No. 32 to United States Asphalt & Refining Co., at \$66,522.50.

**Paterson, N. J.**—By County Board of Freeholders, two large contracts for permanent improvement of Newark and Pompton turnpike, from Essex to Morris County line. Job was divided into two sections of about equal length, total being about four and a half miles. Contract for first section was awarded to Francisco Bros., of Little Falls, whose bid was \$51,600. Contract for second part was awarded to George F. Brackett, whose bid was \$44,641. First section will be improved with amosite and second section with "G. F. B." compound.

**Little Falls, N. Y.**—By State Highway Department to Contractor S. A. Seymour the work of resurfacing three pieces or highway in this vicinity. His work will be that of resurfacing highway from city line westerly to town line of Herkimer; from easterly line of town of Herkimer to village line, and from the city line on east to East Creek.

**Mamaroneck, N. Y.**—By Village Board of Trustees for Rushmore ave. improvement to Joseph Dimando for Telford foundation with bituminous binder, \$10,538.50. Other bids as follows: Warren Bros., \$11,179.50; Hastings Paving Co., \$12,480.50; Charles T. Eastman Co., concrete foundation, amiesite surface, \$9,313.50; Telford foundation, amiesite surface, \$11,497.50; Daly & Merritt, \$10,667.50 and \$10,387.50.

**Cincinnati, O.**—By Director of Public Service for work on streets: For paving Ravine st. with macadam, from Warner st. to terminus, to Kirchner Construction Co.; for paving Carlisle ave. with asphalt, from Central ave. to Park st., to Kirchner Construction Co.

**Niles, O.**—To New Castle Asphalt Block Co. for furnishing block for Church st. paving at \$1.35 per sq. yd.

**Sherman, Tex.**—By Grayson County Commissioners' Court for 78 miles of permanent roads in Sherman precinct to Larkin Construction Co. for \$255,019.40. Work will be commenced as soon as necessary material and machinery can be put on ground. This work is provided for by issue of bonds in sum of \$400,000 recently voted by people of this precinct.

## SEWERAGE

**Bay City, Mich.**—Petition has been received asking for construction of sewer on Fraser st. to connect with Twenty-fourth st. main sewer.

**Corning, N. Y.**—C. C. Vermeule, of New York City, Consulting Engineer of Board of Public Works, has made his report to board concerning sewerage disposal plant which board is to erect on plot of ground just east of Denison Park. Plans call for construction of plant covering acre of ground and costing with engineer's fees amount estimated at \$59,000.

**Youngstown, O.**—Bids will be received until 2 p. m., Aug. 19, at office of D. J. Jones, City Auditor, for purchase of \$1,350 Court st. sewer bonds.

**Williamsport, Pa.**—Bill is being considered for construction of sewer in Baldwin st. to be run to Brandon Park to connect with sewer.

## CONTRACTS AWARDED.

**Oak Park, Cal.**—By City Commission for construction of sewer system to T. E. Clark.

**Bay City, Mich.**—To Nicholas Meagher for Third st. sewer, at \$2,249.

**St. Paul, Minn.**—To John Lind at \$1,000 for laying a sewer on Euclid st., from Bates ave. to Maple st. Engineer's estimate for work was \$984.

**St. Paul, Minn.**—To John Lind for construction of sewer on Goodrich ave., from Sneling to Saratoga, estimated by engineer to cost \$853, for \$874. O'Neil and Preston took contract for sewer on Earl st., from Wakefield ave. to Hudson ave., estimated at \$410, for \$389, and contract for sewer on Rondon st., from Sneling ave. to Asbury, estimated at \$892, for \$752.

**Reading, Pa.**—By Board of Public Works to construct storm sewer on Oley st., from Locust to Thirteenth sts., to Rundle & Rehr, at \$3,988.40; construct storm water sewer at Lebanon Valley Railroad and Second st., to Rundle & Rehr, at \$897.32.

**Salt Lake City, Utah.**—One of the lowest bids ever received by city on sewer extension has been submitted to city commission by Heuser & Sim, a Wichita, Kan., firm from which bid on sewer extension No. 81, including about 8 miles of sewers on east bench, between Ninth East and government reservation. Bid of Heuser & Sim was \$54,901.28, while engineer's estimate based upon prices prevailing in 1911, was \$82,009.36. List of bidders, bids and total amount of each follows: Heuser & Sim, Wichita, \$1.24 per ft.; total, \$54,091.28. Johnson & Nelson, \$1.37 per ft.; total, \$59,762.14. Kennedy Construction Co., \$1.38 per ft.; total, \$60,198.36. McKay & Reid, \$1.51 per ft.; total \$65,869.22. A. A. Clark Co., \$1.54; total, \$67,177.88.

## WATER SUPPLY

**Middletown, Conn.**—Residents of Hunting Hill ave. and West Durant st., Hunting Hill, have circulated petition asking for extension of water main from East Lake st., from Park st. to Hunting Hill ave., about 300 ft.; on North and South Hunting Hill ave. about 600 ft., and about 200 ft. on West Durant st.